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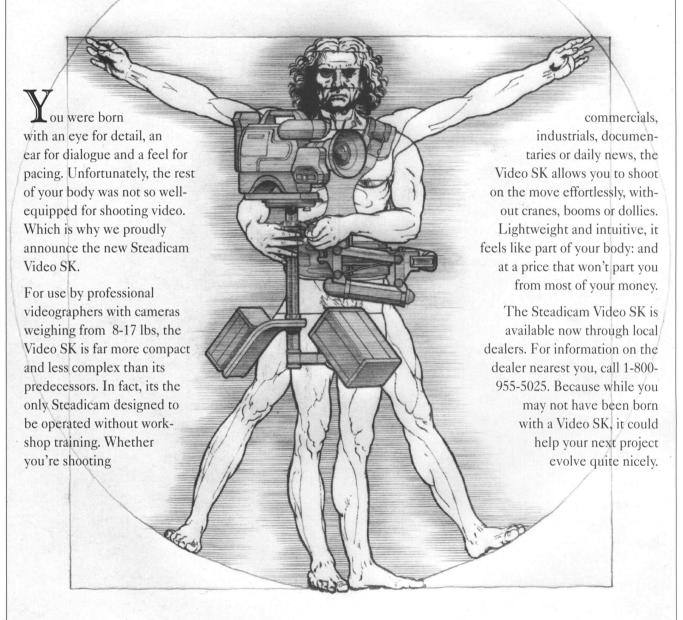
The Pelican Brief:
A Conversation
with Stephen
Goldblatt, ASC

Schindler's List in Brooding Black & White

The War Room
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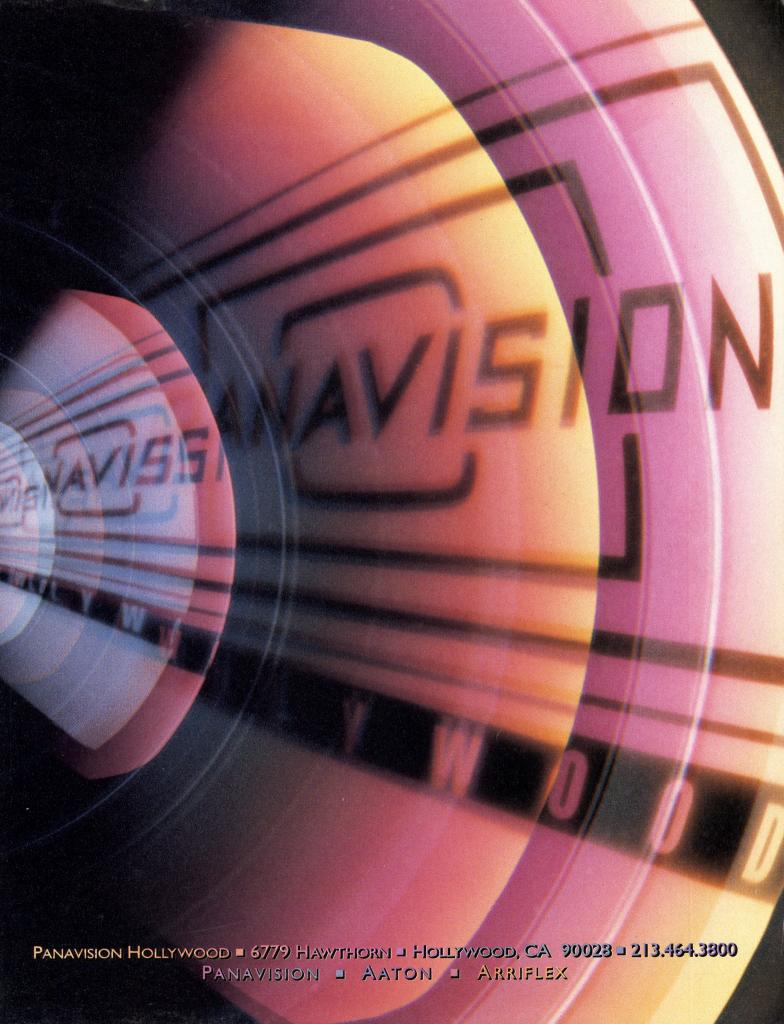


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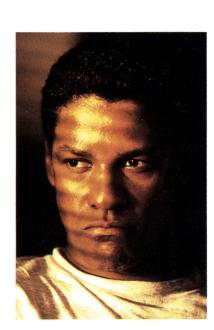
Documentarian lets locations take center stage



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On Our Cover:
Denzel Washington,
illuminated by
Stephen Goldblatt,
ASC, attempts to
shed light on
suspicious events in
The Pelican Brief
(photo by Ken Regan/
Camera Five, courtesy
of Warner Bros.).

Contributing Authors: Brooke Comer Karen Erbach Gretje Ferguson Billy Heald



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January 1994 Vol. 75, No. 1

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The American Society of Cinematographers is not a labor union or a guild, but is an educational, cultural and professional organization. Membership is by invitation to those who are actively engaged as directors of photography and have demonstrated outstanding ability. ASC membership has become one of the highest honors that can be bestowed upon a professional cinematographer — a mark of prestige and excellence.

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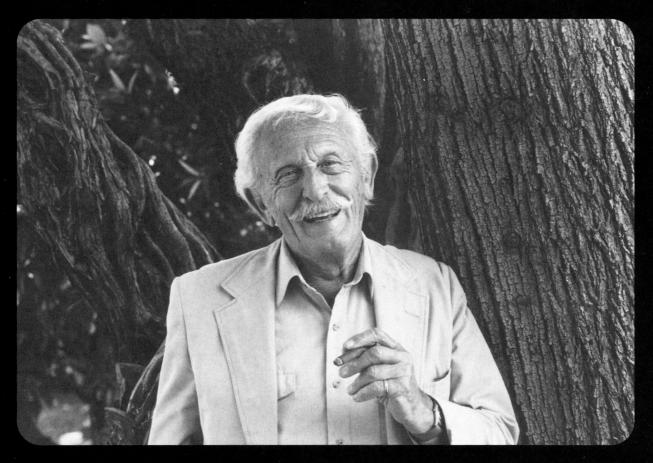
Alternates

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IN MEMORIAM HARRY WOLF, ASC



Harry Wolf was featured in our first ON FILM ad in 1987.

He said: "I teach students . . . about lighting and composition. But I can't teach them to feel what a series of moving images should look like. The ability to visualize and create images out of blackness that communicates feelings is something you are born with."

Harry Wolf was born with a unique talent for filmmaking. He was also a great teacher, and an extraordinary human being. He left an indelible impression with the images he captured on film, and also in our hearts. His memory will be with us always.

Thank you Harry for everything.



New at Clairmont: three high-tech VistaVision cameras from Wilcam

Zeiss lenses, mirror shutter, rotating finder, video tap, 2–200 frames, tachometer, remote controls, strobes, crystal sync-sound with no blimp.

Ve now have three types of VistaVision camera. All made by Wilcam; all state-of-the-art. Ours are the W7, the W9 and the W11. They look similar; the one you see here is the silent-running, sync-sound W11.

High speed, crystal-control

The W7 and the W9 are variable-speed and not silent. The W7 gives you 2 to 200 frames per second, crystal-controlled up to 64 fps, within 0.5% above that. The W9 goes 2 to 100 frames, forward and reverse; all speeds crystal-controlled. Both cameras have tachometer readouts, as well as crystal-sync LEDs.

Eight claws, six register pins

The W9 uses six full-size registration pins and four claws. The W7 has six pins and *eight* claws. On both cameras, the pins use different perfs from those used by the claws, for maximum registration accuracy.

Vacuum back, balanced movement

For best possible film flatness, both cameras employ a vacuumback pressure plate. To minimize vibration, the 200 fps W7 even has a second, reciprocating movement. It doesn't transport or position the film. It *balances* the transport movement by moving in the opposite direction.

Gentle takeup

With both these high-speed cameras, you don't have to take up film slack by hand. When you throw the Power switch, after threading, torque motors in the magazines slowly take up the slack. The cameras then go into Standby mode. When you throw the Run/Stop switch, both cameras accelerate steadily to the set speed. 0 to 100 fps: 2 seconds. 0 to 200 fps: $2\frac{1}{2}$ seconds.

Even wrap

Once at the speed you've selected, sensor arms maintain even tension in the feed and

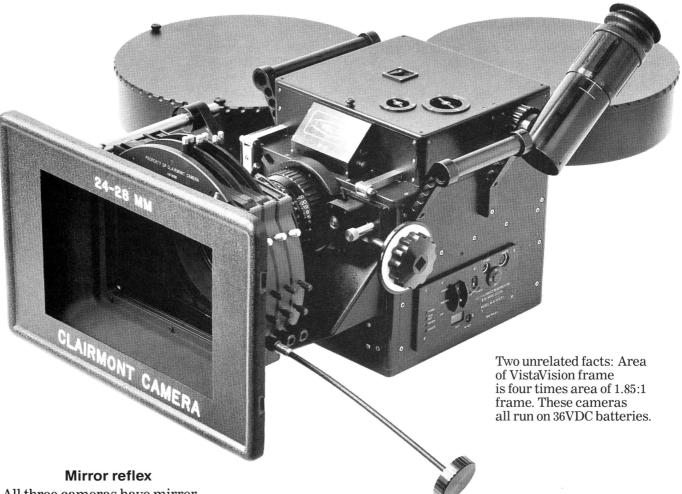
takeup rolls as they change size. At the end of the roll, infrared sensors signal both cameras to stop instantly. Mid-roll stops are fast but also smooth and well-controlled, because of the gear-driven torque motors.

Film path

All three cameras use two 1000 foot magazines: feed on the right side, takeup at the back. All magazines are horizontal, so the film travels horizontally all through the cameras—no twisting. On the silent-running W11, the magazines are belt-driven.

Sync sound

The W11 runs at 24, 25 and 30 fps, crystal sync. At 24 fps, it measures 24dBA or better, 3 meters from the film plane. And it needs no blimp. It uses two claws and six full-size registration pins. The pins use different perfs from those used by the claws. There's a strobe output on the control panel—pulses for film only or for film and finder.



All three cameras have mirrorshutter reflex viewing. The viewfinder system and video tap camera are enclosed within the body door. Two eyepiece modes: normal and 10 times magnified. Registered film clip holder at the groundglass. The finder rotates; the image stays upright automatically.

Zeiss lenses

All three cameras have a BNCR lens mount. But the big VistaVision mirror limits flange depth, so you can't use just any BNC mount lens. (And standard BNC mount lenses wouldn't cover the eight perf VistaVision frame.) We have sets of Zeiss fixed lenses: 28mm, 35mm, 50mm, 85mm, 100mm and 135mm. (The 28mm is like a 14mm on four perf 35mm, of course.)

Weights

With 1000 feet of film, two magazines and 50mm lens, weights to nearest pound are W9: 40 lbs, W11: 60 lbs, W7: 102 lbs.

Modern mattebox

As you can see in the photo, these cameras work with a standard gear-driven follow-focus and with the new 6.6 535 mattebox. Its front filter stage is also gear-driven, for moving grads across the frame. That's the flexible control for it, in the foreground.

Experienced

Wayne Baker has been a First Assistant since 1982, specializing in 2nd Unit action, visual effects, aerial and underwater. He has worked with eight types of 65mm camera and six types of Vista-Vision. "I've used all the weird cameras," he says.

Easiest

"I've worked with VistaVision cameras on which a reload could take fifteen or twenty minutes. Once you're familiar with it, threading the Wilcams is straightforward; reloads take three to five minutes. I find the Wilcam VistaVisions the easiest to work with," says Mr. Baker, "More versatile, faster, more reliable, newer."

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Letters

Et tu, auteur?

As a writer and producer for screen and television and a former stage director who recently directed his first short film, I find AC highly informative and inspiring. However, I found Richard Shore's comments in October's Filmmaker's Forum disturbing, baffling and insulting to serious filmmakers. Claiming that "the author of a film is the director" is absurd. This kind of nonsense has bred a generation of European filmmakers who are generally so inept that their governments are trying to erect government barriers to protect them from American films. If there is a single author to a film it must be the writer. I think only the writer/director can truly lay claim to that title or to the term "auteur."

Congratulations on a great magazine.

— James Tugend Los Angeles

Emmy Oversight

Your article in the October issue concerning the 1993 Emmy Award nominations for cinematography omitted the category of "Informational Special-Cinematography." My fellow colleague Sid Perou — a fine cameraman and speleologist based in England — and I were honored and privileged to be recognized for our work on the National Geographic special *Mysteries Underground* by winning the Emmy in this category.

Lionel Friedberg
 Woodland Hills, CA

Simian Slip-Up

In Gorillas İn Their Midst (AC August), a number of inaccuracies appeared. Insufficient time was given by the magazine to correct the misquotes and errors for Adrian Warren and those concerned. The article incorrectly gave the impression that Adrian Warren was in Kuwait to film a sequence for the Imax film The Secret of Life on Earth; at the time he was still working on Mountain

Gorilla. The Kuwait crew comprised director of photography David Douglas, line producer Diana Roberts, sound recordist Christopher West and camera assistant Dylan Reade. Their filming efforts in Kuwait were so successful that they staved on for a few more weeks to make an entire Imax film. Fires of Kuwait, which was later nominated for an Oscar Meanwhile, Adrian Warren was filming other sequences in Korea before going to Australia for The Secret of Life on Earth. The idea for the film was developed and nurtured by Christopher Parsons, head of the Imax Natural History Film Unit, in Bristol, England. As well as encompassing nearly fifty locations around the world, the story was designed to incorporate new pioneering techniques in macro-Imax cinematography by Peter Parks of Image Quest. Our apologies to all concerned.

— Fd

Errata

We regret that the November In Memoriam for Ellsworth Fredricks, ASC misspelled his name and included an incorrect birthdate. His actual birthday was June 2, 1904.

More Errata

The Reflections column on Yves Angelo (AC November) had all of the film images swapped left-right, but not the slide. Apparently your printer forgot that cinema film has a different emulsion orientation than slides. This is surprising given that almost every other Reflections article has had the correct orientation.

— Benjamin Bergery Paris

Our humble apologies. We also apologize for failing to include the illustration referred to in Benjamin's article on QuickTime in the July issue.

— Ed



Documentarians Honor Their Own

compiled by Chris Pizzello

IDA Honors Drew

Award-winning filmmaker Robert Drew received the International Documentary Association's Career Achievement Award for his contributions to non-fiction filmmaking over the last 30 years. Drew was honored during the association's ninth annual Awards Dinner, held on November 5 at the Miramar Sheraton Hotel in Santa Monica.

In the 1940s Drew was sitting in the cockpit of an Air Force jet fighter,

flying formation with a photo ship holding a Life magazine correspondent and photographer, when he decided to spend the rest of his life documenting the world.

"They were a team small enough to go almost anywhere, expert enough to photograph almost anything, smart

enough to tell a story mainly through still pictures," he recalls. "The idea came to me: I would like to report on the world the way they knew how."

Upon leaving the Air Force, Drew spent ten years as a *Life* correspondent, all the while contemplating another, newer medium that could tell stories in *moving* pictures. "I imagined that if we could add sound and motion to our photography, we could create a more powerful form of journalism," he says.

Drew soon found, however, that heavy equipment and jostling, eightman crews made candid filming impossible, while traditional, linear-style editing diluted the pure impact he sought. "It took me a year, on a Nieman Fellowship,

to search out answers," he explains. "The answer was to minimize narration — lecture logic — which for our form was a killer. But to allow the pictures to tell the story we would need continuous. candid filming. It would take five more years to equip two-person filming teams to go anywhere."

Drew's innovative, fly-on-thewall filming strategy, in which his sound recorder was connected by wire to the photographer's camera, was finally

tested in 1960 for his first project. Primary. Drew and cameraman Richard Leacock (in addition to others, including future documentarians Albert Maysles and D.A. Pennebaker) followed a young Massachusetts senator, John F. Kennedy, through the Wisconsin Primary as he ran against the heavily favored midwestern senator, Hubert Humphrey.

The event

style. proved to be a turning point for both the future president and Drew, who won the Robert Flaherty Award and the American Film Festival Blue Ribbon for *Primary*. The film was Drew's first success and led to 30 years of eclectic, still-thriving 'candid films,' which include Crisis, Faces of November, Storm Signal, Letters from Vietnam, Man Who Dances, Fire Season, For Auction: An American Hero, and Life and Death of a Dynasty. Drew is currently finishing up L.A. Champions, which documents the lives of high school basketball players in south central Los Angeles.

Also at the awards dinner, Discovery Networks founder John Hendricks was granted the IDA's first Amicus (Friend of the Documentary) Award for his support of the documentary format. The Discovery Channel is the only cable network to offer 18 hours a day of nonfiction entertainment, reaching nearly 60 million subscriber households in the United States.

Others honored during the Kodak-sponsored gala included the producers/directors of five non-fiction films which received Distinguished Documentary Achievement awards from the IDA. The films honored were: Intimate Stranger, produced and directed by Alex Berliner; Silverlake Life: The View from Here, produced and directed by Peter Friedman and Tom Joslin: Somethina Within Me, produced by Jerret Engle and directed by Emma Joan Morris; The Life and Times of Alan Ginsberg, produced and directed by Jerry Aronson; and The Donner Party, produced by Ric Burns and Lisa Ades and directed by Burns.

The IDA's Preservation and Scholarship Award was bestowed upon Vanderbilt University's Television News Archive, which contains more than 18,000 network TV broadcasts and more than 5,000 hours of news-related programming.

Two students at the National Film and Television School in England — Jet Homoet and Simon Wilkie — walked off with the David L. Wolper Student Documentary Award for their film The Fire Within



SoftImage recently announced the launch of an International Value



Robert Drew (left) with cameraman Frank Simon. The two-man camera crew was the building block of Drew's filmmaking WHERE

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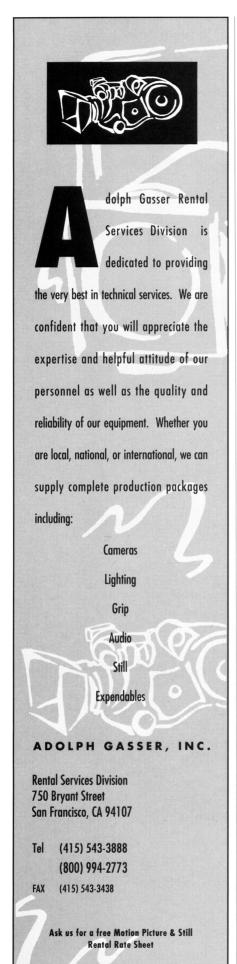
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SoftImage's recently announced Digital Studio product will offer an open architecture software-based solution that fully integrates all of the tools required for professional on-line and non-linear editing, paint, sound, special effects, and 2-D and 3-D animation applications.

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Interfilm Forges Deal

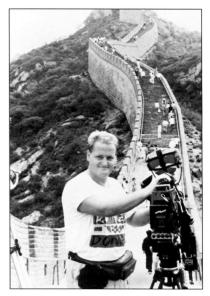
Interfilm, Inc., the producer of the world's first interactive, theatrically released film, has entered into an agreement with American Multi Cinema, Inc. to install the Interfilm technology exhibition system and exhibit the company's interactive motion pictures in 10 of its multiplex locations for a term of approximately three years.

The AMC commitment brings to 21 the number of theater auditoriums that will exhibit Interfilm's interactive motion pictures, which the company refers to as "Cinematic Games." Interfilm's next release is slated for the first half of 1994

For information: Interfilm, Inc., 1225 Grand Central Ave., Glendale, CA 91201-2425, (818) 502-9100, FAX (818) 502-0052.

Panoram Depicts China

Due to the new Panoram presentation format, visitors to the justopened Splendid China, a \$100 million, 76-acre Chinese-themed attraction just



outside Orlando, FL, can experience a striking film delving into the history and culture of China.

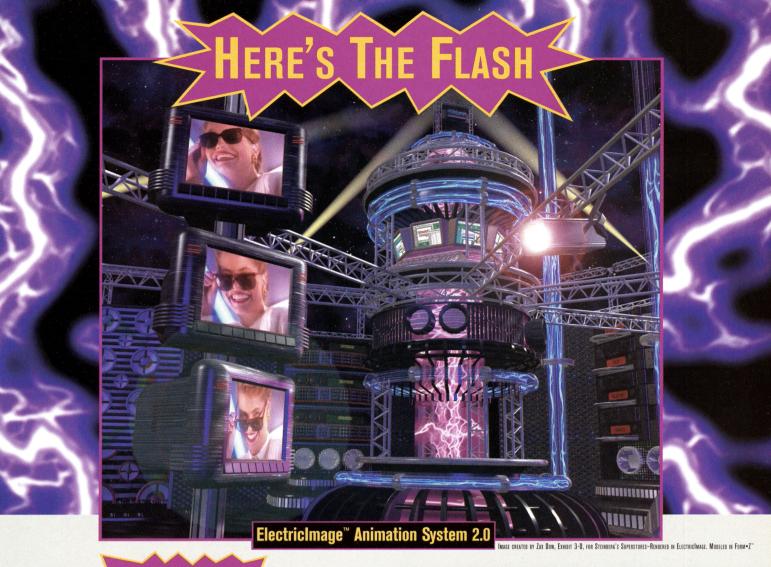
Called *This is*Splendid China,
the 12-minute pre-

Associate Producer Rusty Rustad (pictured here) and a team of five filmed and videotaped scenes ranging from the Great Wall to the Stone Forest in Yunan Province.

sentation takes viewers on a 10,000-mile journey throughout China. The Great Wall, the Forbidden City, the Stone Forest of Yunan Province and the Chinese people themselves come to life on a triple screen. Accented by a superior sound system, *This is Splendid China* is exhibited in Splendid China's 300-seat Harmony Hall, located in the Suzhou Gardens entrance complex.

The Panoram production process blends 35mm motion picture film footage, videotape and still 35mm transparencies into a combined presentation. The cinematic presentation is projected by three computer-operated units employing preprogrammed laser discs. The transmission is so fine that there are no seams on the screen, and the different visuals blend to present a complete image.

Producing This is Splendid China required careful advance planning and patient execution. Filmmaker John Binkowski and his associates at production company Renaissance, Inc., staged a three-week shoot in China at seven different locations. A five-person crew, including producer/director Ken McCabe, assistant producer and video cameraman Rusty Rustad, cinematographer Brad



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Lowel-Light Manufacturing, Inc. 140 58th Street Brooklyn, New York 11220 Tel: 718 921-0600 Fax: 718 921-0303 Fuller, assistant cameraman George Burkett and production assistant Patty Bender, traveled more than 25,000 miles in 21 days to shoot the film. From the Gobi desert and the mountains of Yunan Province to downtown Beijing, the crew moved 24 crates laden with production equipment to capture China on film and video.

For information: Carl Reynolds, Splendid China, 3000 Splendid China Blvd., Kissimmee, FL 34747, (407) 396-7111, FAX (407) 396-7392.

Russian Infomercial

Complete Post in Hollywood recently handled the postproduction for what is believed to be the first infomercial produced in Russia. The facility provided digital graphics, editorial and audio sweetening services for the



30-minute show, produced by Los Angeles-based Multi Entertainment and promoting *The Classic Russian Fairy Tale Film Collection*, a 24-title home video series for children created by Moscow's legendary Gorky Film Studio.

Set in Moscow, the infomercial treats viewers to a tour of the sprawling Gorky facility. As host Donald O'Connor and six children stroll the halls and wander among the huge sets used in the films, costumed characters pass by while others come to life before their eyes.

Complete Post's editorial team assembled the show in an on-line bay working from one-inch, Betacam and D-2 sources. The editors executed numerous page turns, ripple and other transitional effects using ADO and Kaleidoscope effects systems. Among other things, the editors turned moving images into postcard-like snapshots for a montage showing O'Connor touring Moscow.

Many other effects were created by Complete Post's graphics team

on a DP-MAX digital effects system. For example, artists used the device to create three-dimensional video cassette boxes from flat artwork, and used other art elements created by a Russian artist to add colorful borders to product shots.

The facility's audio services included adding music, voice-over and sound effects, and ADR work.

"Infomercials are rapidly becoming more sophisticated," said Complete Post Vice President of Sales Dan Felice. "The productions are more refined and the look more polished. They are no longer simply a 30-minute buyout ad; they offer a visual experience with a story. The 'buy now' message is still there, but it's more entertaining."

For information: Complete Post, 6087 Sunset Boulevard, Hollywood, CA 90028-6475, (213) 467-1244.

Water Power Documentary

The Space Science Studies Division of the Malaysian Prime Minister's Department has selected Florida-based Omni Films International to produce a custom 70mm documentary film for Malaysia's new national planetarium theater in the capital city of Kuala Lumpur.

The film, which carries the working title *The Power of Water*, will study the various effects of water on the geographical development of both Peninsular and Eastern Malaysia. Locations will include Mt. Kinabulu, the tallest mountain in Southeast Asia; the Mulu Caves, the largest known cave system in the world; and the ruggedly beautiful Langkawi Islands.

Frank Capra, Jr., a member of Omni Films' board of directors who has produced numerous feature films, will produce and direct the film, with European director Siegfried Baldzuhn handling the underwater sequences. Russ Allinson, who has made 11 films with Omni, will be director of photography.

The film will be produced in Omni Films' 8-perf, 70mm Omnivision format, which is designed for use on the domed screens typically found in planetariums. The huge, curved screens give viewers unobstructed panoramas, often from horizon to horizon.

For information: Woody Westlake, Omni Films Publicity, P.O. Box 5807, Sarasota, FL 34277, (813) 924-4239, FAX (813) 924-2643.

January 1994

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Wisconsin Film Office

Cinnabar's "Greeting Card"

Moviegoers have been greeted this holiday season by a theatrical "greeting card" created by special effects and scenic company Cinnabar. Produced by Raimondi Films for the *Los Angeles Times*' behind-the-scenes series, the trailer highlights the wizardry of Cinnabar's special effects with a magical winter scene.

The snow scene is preceding movies on more than 1,200 screens in Southern California theaters from November 19th through the first week in January. "The trailer gives audiences an insider's peek at a Hollywood creation," said Doug Morris, president of Cinnabar.

Cinnabar demonstrates several industry effects techniques in the piece, from the construction, painting and sculpting of the set to the special effects used for creating snow and set perspectives. According to director Paul Raimondi, "Behind-the-scenes trailers are entertaining and give people a greater appreciation for the effort that goes into filmmaking."

Cinnabar, which works on more than 400 commercials a year, provides services that include set design and models, production of specialized equipment and electrical engineering.

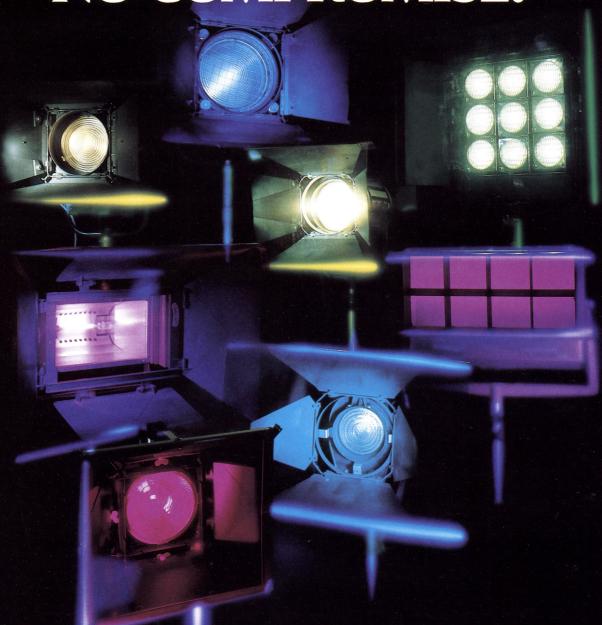
For information: Cinnabar, Hollywood Center Studios, 1040 N. Las Palmas, Hollywood, CA 90038, (213) 462-3737.

Nickelodeon Promo

Nickelodeon has fittingly decided to sell their hit programs in the home video market through a hip animated commerical. Building on Nickelodeon's distinct style, Olive Jar Animation has produced a fast-paced stop-motion commercial through Chiat/ Day/New York to launch the ad campaign. The spot introduces the video release of four popular Nickelodeon shows: Snick, Ren and Stimpy, Rug Rats and Doua.

Chappy Cauldron, the hero of the 30-second spot, is a machined-metal miniature television with armature hands and arms. His head is constructed to look like a VCR and is complete with an alpha display whose digital screen conveys his emotions and actions through terms like "jump," "mangia," and "burp." Chappy's body was built around a modified Sony Watchman television set on which actual

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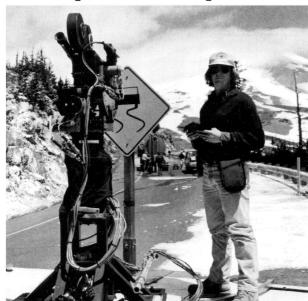
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footage of the Nickelodeon videotapes was output frame-by-frame. This allowed Olive Jar's artists to animate both the character and the video footage simultaneously through stop-motion animation, thus eliminating the need for video compositing effects.

Chappy's living room is actually a miniature set "with an attitude," detailed by peculiar statues, funky furniture, and vivid green walls covered in Pop Art. Chappy is disguised as a simple television set playing an old black & white movie. He becomes bored and quickly comes to life by spitting out the video cassette, hungrily searching for a more interesting video snack. He finds tasty tapes of *Ren and Stimpy, Rug Rats* and *Doug*, which he promptly eats by inserting them into his VCR mouth. As the shows' footage appears on the screen, he reacts with glee.

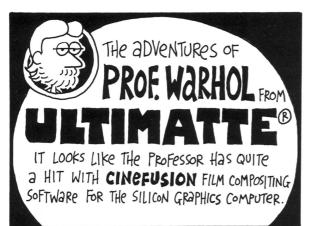
Fred Macdonald, Olive Jar's creative director and director of the spot. incorporated a unique set, complex camera shots and lighting, and an innovative animation concept to intrigue Nickelodeon viewers. "We designed a miniature and fully functional television that interacted completely with its Pop Art environment," says Macdonald. "Chappy's brushed metal surface is highly reflective so that all key lights would reflect onto the set's surfaces. Also, the television screen of his body became another interesting lighting source for set reflections, particularly on the marble floor."

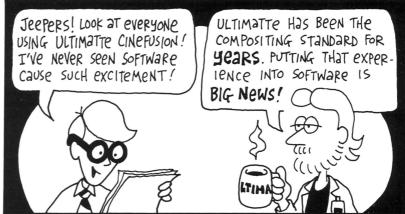
For information: Olive Jar Animation, 44 White Place, Brookline, MA 02146, (617) 566-6699, FAX (617) 566-0689.

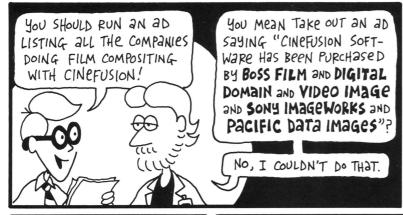
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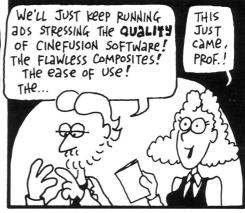
















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Filmmaker's Forum

The Chicken and The Egg

by John Hora, ASC

Recently I attended a demonstration of one of the new digital sound systems currently being promoted and used for theatrical motion pictures. During the presentation, the likelihood of this system being directly compatible with home theater and video presentation was emphasized. Achieving good, loud sound in the home is much cheaper and easier than achieving a big, sharp picture.

Since this system's sound track is contained on a CD-ROM separate from the film, we asked about plans to

implement its use in 70mm release. "This will kill 70," the man said. "There's no need for 70 anymore!" The implication was that the only reason for 70mm

release would be to secure a better sound track. But what about the picture? No need for 70mm? Is there any need for a better picture at all?

The film shown as a demonstration was a 1.85 release. It is good to remember that the 1.85 presentation was developed rather quickly as a way to "convert" existing finished 1.33 productions to wide screen after the wildly successful introduction of Cinemascope in 1953. In terms of quality it is near the very bottom of all the formats in the use of negative area. In 1953 they just cropped off the top and bottom of the frame along with heads, feet and even titles and sold it as the "Giant Panoramic Screen."

Yet it is this 30-year-old format to which HDTV is most often compared in demonstration. Its level of quality is considered the goal that the HDTV systems hope someday to equal. The 16:9 aspect ratio of HDTV (a ratio never used in any film in the world as far as I know) is very close to the 1.85 ratio so hastily

devised in 1953. The screen width for HDTV projection demonstrations is usually quite moderate, sort of good for the home. If theatrical presentations themselves were allowed to consist of only a moderately wide screen of limited size and of limited resolution but with terrific sound, would we not be describing the "Home Theater"? What would cinemas offer that will not be available in the home? Why go out and buy a ticket at all?

Thirty years ago the motion picture industry reacted to the threat of

Today, much of the development is guided by those interested in selling equipment to consumers.

television in the home with very large and very wide screens. Cinemascope, Todd-AO, and even 1.85 were meant to be shown on very large screens. Theaters ripped out rows of seats and placed the screen forward of the old proscenium. They hung new curtains to accommodate the dramatically larger presentations. Cinemascope, at 2.55:1, was not only nearly twice as wide in aspect ratio as the traditional screens, it also was physically much wider and taller than the 1.33 screens it obliterated. It used areas of the negative and print that had been wasted since the acceptance of the standard Academy aperture concurrent with the introduction of optical sound on film. At a time when most people had never heard any stereo at all, Cinemascope was accompanied by discrete four-channel stereophonic sound recorded live with multiple channels on the set. Cinemascope films were originally shot with relatively wide angle optics and with action spread across the screen like a panoramic vista.





Recent credits: "Due South", "Top Cops", "Secret Service", "True Stories", "Moment of Truth", "E.N.G."

Ron Stannett on the Fujicolor F-Series.

he launching of a new show or television series is always an exciting time and I'm happy to have been involved in such shows over the past few years. For example, the reality dramas, Top Cops, Secret Service, True Stories and Moment of Truth.

I have found with reality dramas such as *Top Cops* you are on the streets and roofs at night, and somebody is chasing someone either on foot or in cars. To keep to a tight budget, and get the day for the director, you have to "stretch" yourself, but still maintain a look that is going to keep your producer happy and importantly, yourself! Because it was reality-based and a true story, you could not stray from the truth. So if he went through the restaurant to the kitchen, up onto the roof and fell three stories...that's what we did!

With the introduction of the new Fuji F-500 and its fine grain structure and penetrating blacks, we were able to "stretch" the lighting a little more and accomplish the big exterior scenes which gave the show great production value.

Ron Stannett C.S.C. Director of Photography

FUJICOLOR F-52125

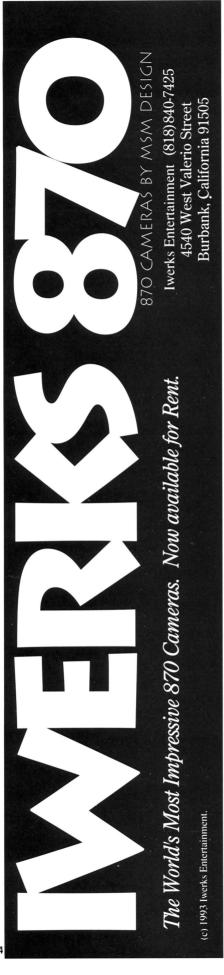
F-64 F-64

F-125

F-250

F-250D

F-500



Todd-AO, in attempting to emulate Cinerama, featured immense. deeply curved screens with a ratio of 2.2:1, 70mm prints running at 30 frames per second, and discrete six-channel sound. The photographed area of the 65mm negative dwarfed the 1.85 aperture. When a conventional film was shown on a Todd-AO screen, it was surrounded on the top, bottom and sides by a sea of emptiness waiting to be filled with a giant, clear image. The contrast to small 16-inch black & white television in the home was of enormous magnitude. There was no possibility that the experience of theater-going would be emulated in the home. This technology was primarily promoted and developed by those interested in selling entertainment for paying theatrical audiences.

Today, much of the development is guided by those interested in selling equipment to consumers. At the digital demonstration, it was emphasized that a primary element of marketing was the ability to use "that magic word, 'Digital.'" In fact, the logo for the process includes the image of a CD designed to imply that the compressed CD-ROM sound is equivalent to the PCM audio CD familiar to consumers. Thus the home entertainment experience is used as a goal to be equalled by the theater.

The image is another story. Limitations in the ability to manufacture CRT tubes seem to have been of prime importance to the establishment of the 16:9 HDTV aspect ratio. Problems associated with getting large tubes through doorways will limit screen sizes until flat displays become available. For the immediate future the largest screens will have to be by projection.

The only way the picture in the home is likely to equal that which can be available theatrically is to lower the standard in theaters and promote the presentation of the marginally wide screen images of only 1.85 or 1.66 aspect ratios on small screens.

Since 1953 films have actually been produced in a variety of aspect ratios and not confined to a single predetermined configuration. Painting, photography, and all the visual arts are contained in various frames which are chosen as most appropriate for the subject. Television alone has always been frozen in all its standards; aspect ratio, resolution and frame rate. Now when it is tech-

nically possible to use new methods and allow video presentation to vary frame rates, the number of scanning lines and aspect ratios, the attempt is to fix on one standard convenient for the manufacturers of the present technology.

The financial success of a film in the home video market is supported and enhanced by a previously successful theatrical release. A really grand pictorial presentation must have at least as much effect as good sound in attracting the paying audience.

Yet many directors refrain from making films in real wide screen because of several related problems. With some exceptions, theatrical presentation often results in the cropping of the sides of a 2.40 Scope film to a narrower 1.85 screen, sort of like pan and scan but without the pan. Difficulties in framing for home video presentation often result in keeping action tightly framed and near the center of the screen, which minimizes the effectiveness when projected in a wide screen theater. Sometimes the wide ratio is retained, and the size is reduced so that the Scope film fits the 1.85 screen on the sides but is even less tall than a 1.85 film. The wide screen film is not only wider but diminished, just like a "letter-boxed" video release. All this is quite different from the original goal of spectacular presentation. The problem is one of the chicken and the egg. Why shoot in large format or wide screen if the presentation is compromised? Why build large screen theaters if the films look like they're shot for home video? Why go to a theater if in a few months you can see it on a home video setup that approximates your local theater?

The one big screen format that does not translate to the home environment is Imax. Because of its large presentation and superior image, Imax is the center of much new activity. Only in Imax is the effect of the home video release not considered. However, good 70mm shot on 65mm negative and presented on screens the size of Todd-AO's or Dimension 150's would result in a presentation so different from the bulk of the current screens that audiences would see the difference. Sell it as "Super 70 Digital" if you must, but get the quality of the image back in step with the advances made in sound, and move beyond the 1.85 image of 1953 and at least equal the Todd-A0 image of 1956. 2×

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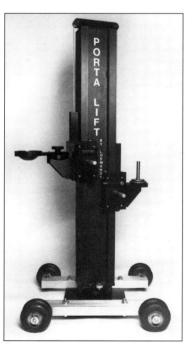
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Moving Images Infiltrate the Art World

Art in motion: a survey of New York Museums accents the growing importance of film and video as artistic media.

by Brooke Comer

The moving image is hardly a new art form. But the number of major art museums around the country that don't have film departments, and which only use moving media as educational and support material, suggests that film and video have yet to be accepted as art in the traditional sense of the word. But not all museums hold that a work of art must remain motionless. New York's Museum of Modern Art.

the Whitney, the Cooper Hewitt and the Guggenheim have all made commitments to moving imagery in varying degrees, ranging from video-related exhibitions to in-house film departments.

The

MOMA has a film department that dates back to 1935, and their video program includes Video Viewpoints, which offers moving-media artists a prestigious platform for their work. The museum is one of the most progressive in terms of acknowledging moving imagery as an art form, which is not surprising given the origins of the institution.

Film was about 35 years old in 1929, when Alfred Barr proposed the idea of a new museum that would become the Modern. Barr, who considered film one of the visual arts of the time, had no trouble envisioning a department of motion pictures in this modernistic museum. But

his was a vision the American public wasn't yet ready to embrace. In 1932, Barr observed, "That part of the American public which should appreciate good films and support them has never had a chance to crystallize. People who are well-acquainted with modern painting or literature are amazingly ignorant of modern film. It may be said without exaggeration that the only great art form peculiar to the 20th



Century is practically unknown to the American public most capable of appreciating it."

The Museum of Modern Art's Film Library, under the auspices of film critic and author Iris Barry, began to collect and preserve the art form of the century: cinema. Through the generosity of Samuel Goldwyn, William S. Hart, David Wark Griffith, Walt Disney, David O. Selznick and other luminaries, the collection began to grow. Barry also searched for films in Europe, as have her successors, and the film collection today includes over 8,000 titles. The Film Department, which recently changed its name to the Department of Film and

Video, has accumulated extensive collections of international documentary, experimental and narrative work from the '60s to the present.

Barbara London, Associate Curator of the Department of Film and Video, has been involved with the video program since it evolved in 1974. "At that point," London explains, "it was part of our project series. It began as ongoing exhibitions." Then a combination of simultaneous events occurred which triggered the launching of the new program. The National Endowment of the Arts gave the Modern its first grant to buy video equipment; the monitors, decks and sound systems facilitated the expansion of the moving-image media. In 1973, London had worked on "Some Recent American Art," a show of paintings and sculptures that traveled to Australia. Some of the painters and sculptors also worked in video. and from them London increased her video vocabulary. "I had some knowledge of the medium," says London, who adds that with the advent of the NEA grant, she "picked up the hot potato and ran with it.

The Modern's video program began with tape showings, which eventually included installations. Within about a year, the Rockefeller Foundation provided a large grant that gave London the ability to develop Video Viewpoints in 1976. The Museum of Modern Art is known as a diverse forum for not only paintings, but also for architecture, design, sculpture, and moving media. When London was devel-

oping the video program, she says, "I felt it was important to reflect the diversity of the museum, and of what was going on in the world. I was also interested in looking at video as an experimental medium and not a commercial one." She and her team tracked the work in different genres: "We looked at works from people with very different points of view, which included documentaries, installation work, computer graphics, and work that was very minimal structurally." From that broad view, London always tried to look at parallels between video and other art forms - "between video and photography, or between video and what was happening in painting and sculpture."

Each department at the Modern has a different viewing policy, and though London

encourages submissions on either threequarter-inch or half-inch reels. she adds that because of a limited staff that's kept busy planning and promoting lectures, shows and fundraising, "I can't always be as fast as I'd like to be in terms of

turnaround." She jokes that she's a word junkie. "I save every bit of paper artists send me, and keep it in their files. That's how I'll research a show later on."

Video artists can get into a group show based on a submission; London will choose 20 tapes that fit into a specific theme. "That's one way an artist might break in and get shown in an exhibition," she says. Or she'll track a promising artist, sometimes following their work for years. New York video artist Maureen Nappi, for example, was causing a sensation in Manhattan's video art world,

pushing the boundaries of technology by bringing painterly touch to a computerized medium. London had been following Nappi's work, § and brought the artist's we "Continuum" the to the Modern. "We're always for looking

work that's pushing the technology but also has content," says London. "I'm looking for work that comes from a more personal point of view, not like most of the things you see on TV. It's not always going to be pleasantly entertaining, but it'll be provocative in one way or another." She



chooses her artists not only from people who submit their unsolicited reels to her, but also on the basis of recommendations from writers, teachers and other curators and artists. "I keep my ear to the ground," she says. "I ask people on faculties who their best students are. We all share information. We're all helpful to one another."

What trends does London recognize among the submissions she's been receiving lately? "Right now," she says, "I think the bubble's burst. It's happening in all the arts: more people are getting down to ba-



sics. They're not just concerned with the politics of issues, but with something moving, something that's going to touch you. We're all looking for work that has some kind of magic."

In order to track the progress of technology, London's spent time in Japan, where high-definition televison is making advances. "In a media like this, a certain amount of work is driven by technology, because the tools happen first," she submits. Sometimes it takes a certain period of time before these tools become accessible to artists, "but we're looking for more than a product of experimentation," says London. "We're looking for content."

New York's Cooper Hewitt is a design museum that often uses video in exhibitions, primarily as an educational component to expound on the subject through interviews with the designers. But "Mechanical Brides: Phone of the Future" marks "one of the first times that we've used video as a design medium per se," says Curator of Contemporary Design Ellen Lupton. "It's not just as an educational backup. We're using it as its own medium and treating it as an aspect of design." She adds that video also stood alone on its own artistic turf in the October '92 "Power of Maps" exhibition, which showed how moving video images created by computer are used in contemporary mapmaking.

The Cooper Hewitt has no film department, however.

Opposite: The Metaphor Mixer at the Guggenheim Museum enables viewers to fly through a virtual stock portfolio that illustrates a variety of investment information, and interact with a software agent. This page, top: World I creates a cavernous world in which souls alternately flee from and engage the viewer. Bottom: In Virtual String Quartet, viewers can prompt members of a string quartet to improvise solos by tickling their virtual representations.

The Cooper Hewitt Museum's "Telephone of the Future" installation simulates the range of services that will soon be available through the telecommunications network, from face-toface conversation to the delivery and storage of information and entertainment.



"Our departments are really organized around the traditional decorative arts," Lupton explains. "We have textiles, wall coverings, drawings and prints for some of the exhibitions that our museum originates. We look at design in a more expanded sense. We'll tie information to a physical object. The nature of information is such that it's often created electronically. Often, information is integral to the moving image."

"Mechanical Brides" is an exhibition about objects which were central to women's work in the 20th Century. Objects in the show include the telephone, the typewriter, the washing machine, and the electric iron. "At the end of the exhibition," says Lupton, "we've created a simulation of the telephone of the future, which we see as a pool which will bring home and office functions together." The simulation involves a range of phone services and types of communication that will be available in the near future, including shopping, movie ordering, health care, face-to-face conversation, and speaking with clients, colleagues and family members. "We've simulated that through an interactive computer program that acts as a laserdisc," Lupton explains.

The video project was created in collaboration with NYNEX Science and Technology and two freelance interactive media designers, Mark Avnet and Sharleen Smith. Lupton points out that the museum offers growing opportunities for film and video artists: "We'll look at reels, in standard three-quarterinch, and though we don't produce a lot of work that involves video yet, we are incorporating more and more video into our exhibitions."

"Virtual Reality: An Emerging Medium" became the first presentation of its kind in an American art museum when New York's Guggenheim Soho installed the computer medium, designed to immerse the viewer in an artificial world, in its lobby last fall. While the Solomon R. Guggenheim does not have a video department, the Museum's Deputy Director, Michael Goven, says that "it's not unusual in the history of art and visual arts that artists would be exploring the use of every new medium that is available to them."

Those new mediums will get a bigger forum when the "uptown" Guggenheim, located on upper Fifth Avenue, completes a major renovation project in 1994-1995. The museum's under-

ground auditorium will be outfitted with state-of-the-art technology and will be used for film and video screenings. Some of the screenings will be related to exhibitions, while others will be actual artistic presentations.

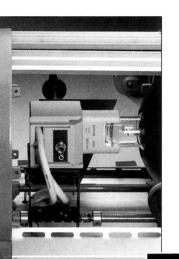
The new technology that virtual reality employs offers a peek at the future, particularly in regard to the cultural impact the new medium will have. The Guggenheim exhibit featured five separate virtual reality "worlds" displayed on personal computers, three presented for the first time in public. Many different artists, including musician Thomas Dolby and creative visionary Jenny Holzer, were involved in the evolution of the five "worlds," which were also developed in conjunction with the Intel Digital Education and Arts program.

Computer technology is an increasingly crucial ingredient in visual art today, and virtual reality, which is still evolving, gives artists creative possibilities that haven't been available through other digital media, such as video or computer graphics. The immersive nature of this media differentiates it from looking at a monitor screen: viewers are totally surrounded by the computer-generated environments. After donning a headset that displays a computer-generated environment, the viewer experiences an illusion of motion facilitated by a sensor on the headset that tracks the user's head movements. Virtual reality also allows the viewer to interact with other virtual objects and characters, or even to meet a graphical representation of another viewer.

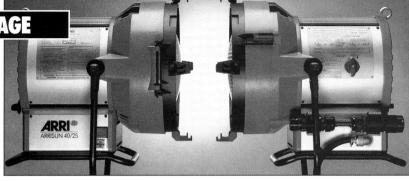
One of the available "worlds" in the Guggenheim installation was artist Jenny Holzer's first visual artwork, an untitled piece featuring a cavernous world from which souls emerged and engaged the viewer. Holzer is best known for her computerized L.E.D. (lightemitting diode) signs and other

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Another computer world at the Guggenheim created by recording artist Thomas Dolby and co-developer Eric Gullichsen, was the first interactive world to synchronize animated figures with 3-D sound. The results gave the illusion that the various sounds were actually coming from different points in space. In the "Virtual String Quartet," the viewer was immersed in a rehearsal space where a string quartet (specifically, the Turtle Island String Quartet) played Mozart's "Quartet number 21 in D major." If the viewer moved to a different part of the room, the sounds shifted accordingly; no matter where one went, the cello sound always seemed to come from the cello. The interactive nature of the piece allowed viewers who wanted to "make contact" with a musician to send that player into an improv jazz piece, or into a bluegrass solo — sounds that might or might not blend with the classical music.

Carl Loeffler and Lynn Holden from the Studio for Creative Inquiry at Carnegie Mellon University developed the fourth world: "The Networked Virtual Art Museum: The Temple of Horus." This display let viewers explore the parameters of a virtual reality museum. "Temple of Horus" was based on a model of a computer network, which made the "new" museum simul-

taneously accessible to people in different parts of the world. "Visitors" could examine a reconstruction of a 4,000-year-old Egyptian temple to the god Horus, and find out the ancient rituals and stories behind the hieroglyphics and statues. And because two different computers were connected by a network, viewers could also see representations of fellow visitors walking through the temple.

The fifth computerized world, "The Metaphor Mixer," took its subject from the world of finance. Conceived and designed by Maxus Systems International, this world was a "virtual stock portfolio." Virtual reality can depict abstract space, and "Metaphor Mixer" took advantage of this to create a visual language for 10 different investment variables. Viewers were made to feel as if they were swimming through an ocean of data. Corporate logos rose and fell with their stock value, while special opportunities and risks were highlighted. Viewers could even interact with a software agent who would help them hunt down companies based on investment criteria.

New York's Whitney Museum of American Art began to include and integrate video into its exhibition program under the auspices of Curator of Film and Video John Hanhardt, who is considered one of the most influential curators in American video. Prior to Hanhardt's tenure, which began in 1974, the late David Bienstock had established a strong film department which presented what was in 1971 a cutting-edge program called "A Special Videotape Show."

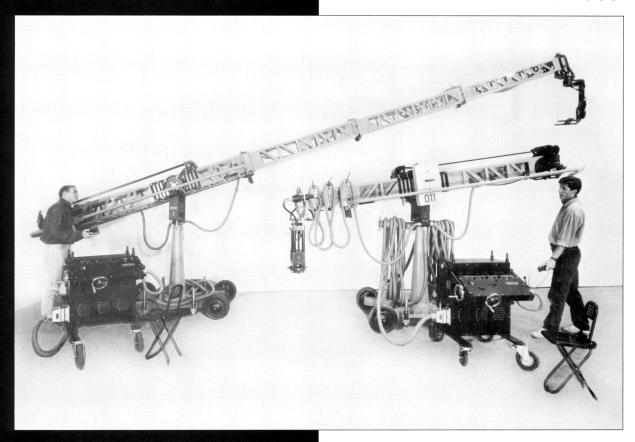
Today Hanhardt's program is widely recognized for its New American Film and Video Series, and for the fact that video is in the Museum's Biennial. In fact, video became part of the Biennial before film did in 1973. The '73 Biennial included seven videotapes and one installation. But while the inclusion of video was important in '73, video's full

recognition didn't come about until 1975. And it wasn't until the 1979 Biennial that both film and video were shown. Hanhardt is also credited with expanding video's visibility by exhibiting the electronic media with established art forms. He's also curated large video exhibitions at the Whitney, such as last year's Nam June Paik exhibit.

Hanhardt believes that video's acceptance in the art world was based on the strong ties between electronic media and the art world. Video was a medium used by performance artists and conceptual artists, while film had a long, structured history of its own. When Hanhardt first arrived at the Whitney, his goals were to integrate the department more fully, emphasizing the avant-garde, documentary and narrative programs. He maintained the program of week-long film exhibitions that Bienstock had originated, and when video became part of the program, he chose to show the new medium in the same fashion. There were new needs: a re-wiring of the theater, new equipment (there weren't many video projection systems around in 1975) and a staff video technician. Hanhardt was able to persuade the museum to provide the same support for this media as they did for painting and sculpture.

In 1979, "Re-Vision: Projects and Proposals in Film and Video" took up the museum's entire third floor. It was an important show for Hanhardt and for the Whitney, because it involved a large museum exhibition devoted to video and film as installation forms. The installations were by Michael Snow, Morgan Fisher and William Anastasi, and all the video was closed-circuit. With the exception of Snow's installation, all were site-specific. Hanhardt remembers Buky Schwartz' "Videoconstruction," in which the camera was pointed near the ceiling, "where there was a painted area you could walk on. TCC is proud to introduce the latest in Telescopic Cranes

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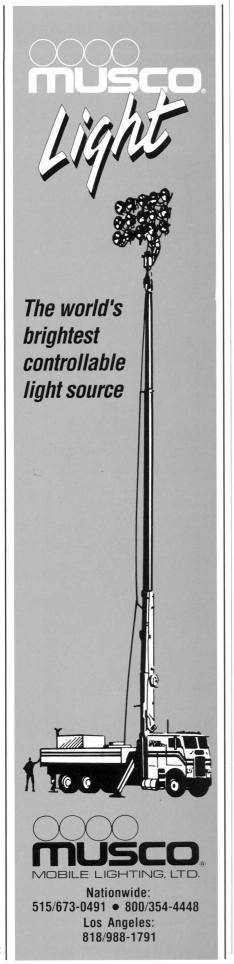


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You saw a yellow triangle on the monitor, and from the point of view of the camera (closed circuit, real-time), the two-dimensional properties of the medium flattened the three-dimensional space of the gallery into an object visible only on the monitor. Only when you were in the gallery could you see what was happening."

Bill Bierne's "Rumored Innuendo" used four closed-circuit surveillance cameras in different non-exhibition locations in the museum — one in the restaurant, one in a curator's office, one in the lobby and one on a stairway. The cameras and microphones were not visible, but the areas were marked and labeled. "Bierne had performers come in regularly and act like the public," Hanhardt recalls.

In "Cloud Music," by Bob Watts, David Behrman and Bob Diamond, the camera was pointed at the sky through a window on the museum's third floor. A video synthesizer and an audio analyzer allowed the artist to create a score by moving sensitizers on the screen. Changes in light intensity set off harmonic sounds that filled the room.

More recently, "The Cave" was presented at the Whitney. Video artist Beryl Korot, whose multimonitor, multichannel video installation was part of the New American Film and Video Series last fall, is known for her multichannel installations "Dachau 1974" (1975) and "Text and Commentary" (1977). "The Cave" took its name from the only site in the world where both Jews and Moslems worship: the Cave of the Patriarchs, where Abraham and his descendants are buried. The video portion was an integral component in the documentary music/video/theater work, which also featured music by internationally-renowned Steve Reich, whose contemporary compositions have been performed by the likes of the New York Philharmonic and the London Symphony Orchestra.

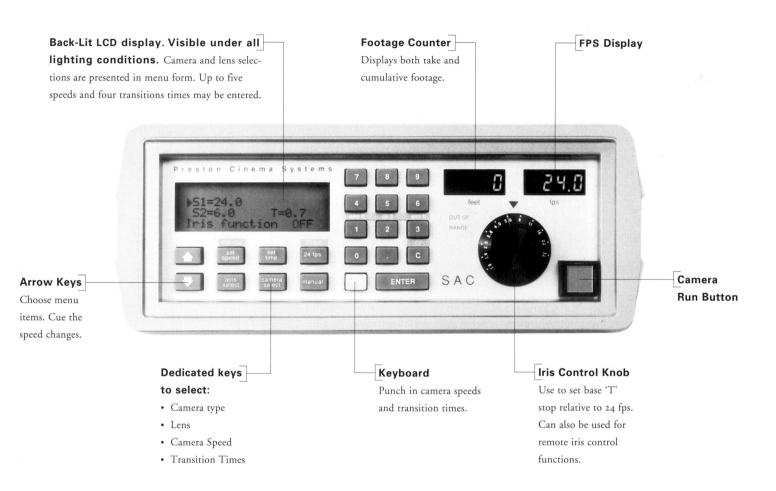
"The Cave" examined the Biblical story of Abraham and his family from different contemporary viewpoints. Korot and Reich interviewed people of Jewish, Islamic and Christian faith for perspective, and the responses they received formed a framework for "The Cave," which explored image-making both as a process and as a representation of place.

Hanhardt selects works for exhibition from submitted materials, recommendations, and from viewing at schools where he lectures and juries. When he looks at a piece by an artist with a body of work behind her/him, he asks himself how it "works," and how it explores an area which that artist hasn't previously explored. When assessing the works of newer artists, he tries to determine if the pieces repeat what someone else has done. He also looks for qualities that put a work over the edge. If the piece being examined is a narrative film or an animation, he measures it against the history of its own genre. "Work can enrich a tradition as much as explore it," he notes. "I'm looking for work that isn't just conforming to a tradition that's already exhausted itself."

Hanhardt's commitment to film and video has strengthened the department without shifting its direction toward either sprockets or tape. "I have always maintained that there is a basic, ontological distinction between [film and video] — how they function and their history. There are limitations in terms of time, in terms of how much one can present in an exhibition year. Both film and video represent an enormous range of styles and genres in installation/sculpture/ performance/telecast singlechannel and theatrical film forms. I do see lots of changes happening in the moving-image media — how film is going to function, what both film and video are going to become. They're going to change dramatically. The question is how."

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1659 Eleventh Street Suite 100 Santa Monica, California 90404 tel 310 453.1852 fax 310 453.5672 In early November, as postproduction was coming to a furious finish on director Alan Pakula's *The Pelican Brief*, Stephen Goldblatt, ASC and fellow cinematographer Robbie Greenberg, ASC sat down for a casual conversation regarding Goldblatt's work on the film. Verbatim excerpts from the discussion are printed here, followed by camera loader Billy Heald's written reminiscences of the project.

Greenberg: Did [the project] meet your expectations?

Goldblatt: Well, I had worked with Pakula once before, and it was very easy. So the relationship was in place from day one. We had a kind of visual, almost verbal shorthand, which made life better for us.

Greenberg: Is he very specific about visuals?

Goldblatt: No. He does have very specific images in mind here and there, but he's — I don't want to say seat-of-the-pants — he's very organic. He likes prep, but he doesn't like too much prep. He definitely likes to clear the set, and talk to me before the actors about the location or the sets, just so he can see the parameters from a somewhat practical point of view.

Greenberg: Right; he's receptive if you say, 'If you're looking in this direction it'll look much better.'

Goldblatt: Exactly. And he's also receptive in that he's producer/director. If I say, "Yeah, well, we can do anything you want, it's just how badly do you want it at this stage of the game?" (Laughs.) And we discuss these things very openly — obvious things like budget. We could do it like that, but is it worth spending the time and cash for this story point, when we need it somewhere else? That's an ongoing conversation all the time, and I like it.

Greenberg: That's great. I think fiscal responsibility is a good thing when it's shared that way.

Goldblatt: But it's also energy. The fact is that between prep and shooting, I was on this for six months. And if you're

wasting too much energy, you're wasting money. . . it's bad.

Greenberg: Was there a lot of time for you, or meaningful time, with the production designer?

Goldblatt: Yes. The designer was Phil Rosenberg. For example, we had translights to do, and we went for a drink at the Marriott off Times Square. We went up there, and we saw ex-

help. We'd shoot five days a week most of the time and scout or prep on the sixth day. Sometimes we'd be prepping at night. The accelerated production schedules that are going on at the moment, during production and preproduction and post, are really making things more difficult than they were even, say, three years ago.

Greenberg: Absolutely. I completely agree.

Goldblatt: And the sort of people who are adept at seat-of-the-pants will do better at it. But it doesn't mean the work's better.

Greenberg: No it doesn't. At all. (Chuckles.)

Goldblatt: The audience, in the final analysis, doesn't care

Conversation: Examining The Pelican Brief

actly the angles we wanted for the three translights we needed, morning and dusk and night, and that was very good because it worked out as we had imagined.

Greenberg: Were there a lot of sets?

Goldblatt: Yes. Lots of bedrooms and hotel rooms — it was that kind of story. But there were some that were more important than others. Also, the production was skewed in that Alan didn't have as much prep as he would have wanted. So the New Orleans end of it was quite well prepped, but the Washington bit, which came second, was less so. There was less time. He would have liked another couple of months, which he couldn't have and still get the film out by Christmas. So that really didn't

what problems are involved.

Greenberg: Did you work in the city?

Goldblatt: Yeah, but it was mainly New Orleans and Washington. There was just a bit in New York. We had sets built in both places. Because of the post-production everything was shot virtually in script order, and was cut as we went along.

Greenberg: Really. Did you find that that helped you maintain a consistency?

Goldblatt: It helps, in that you have a very clear idea and memory. . .

Greenberg: From day to day, yes. . .

Goldblatt: It also helps the transitions and the actors. And considering the lack of prep, it was beneficial. It helped the post



as well, because you wouldn't know where you were otherwise. We finished shooting second unit three weeks ago, and the thing comes out December 17. It's unbelievable. And everyone knew this going in, that it would be mad. But that didn't mean we shot short — we shot for 89 days. But shooting in order helped that process.

Greenberg: Were you able to live up to your plan? Of course, you were dealt some "cruel blows" along the way...

Goldblatt: (Laughs.) Yes, there were some cruel blows, and there were some great strokes of luck. Great weather strokes, beautiful matching weather sometimes. We had a dawn shot in Denzel Washington's apartment — dawn lit on the set. Two months later, out of order, we picked up the preceding shot sunset for dawn, and the light just popped through a cloud; it matches perfectly. That sort of thing. And then working in New Orleans with no rain.

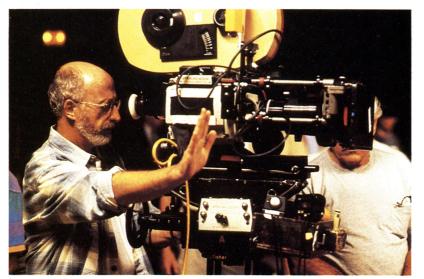
Greenberg: That's a miracle. Goldblatt: In the summer, extreme heat. All sorts of things like that. We had one big sequence in New Orleans during which we got cloud cover just at the wrong time, but by then we were shooting quite tight and using 4K Pars to simulate sunlight in medium shots. Getting away with things like that — we were generally very lucky, unbelievably lucky.

Greenberg: Did you do anything unusual to your own personal style? Did you break any of your own rules?

Goldblatt: No, I don't think so, but I was very concerned with the way it would cut, with the transitions, with the eyelines, with the points of view. In some ways it was a very traditional photographic approach. The story's the thing. That doesn't mean you couldn't do a lot — we did.

Greenberg: It is a suspenseful book. Did you find that the style of doing a suspenseful story

Previous page: Claustrophobic framing implies the increasingly intimidating and solitary task of law student Darby Shaw (Julia Roberts). This page, left: Cinematographer Stephen Goldblatt, ASC mans the camera. Right: Warm light is cast on a slumbering Shaw.



required extra shots or other things to keep up the suspense?

Goldblatt: I don't know if it was a suspense film as much as a personal and political film. And if that's the change from the book, I like it. I think that's what it is, but I'm so close to it. One thing that we enjoyed was shooting in anamorphic and exploring all the possibilities for the compositions, like making the compositions very conventional at the opening of the film, when things are happy and normal, and then skewing things more and more, shortsighting people a lot, as the film went on, and shooting in uncomfortable compositions when things were getting ugly and difficult.

Greenberg: Did you find the anamorphic format more difficult?

Goldblatt: No. I like it. I find everything falls naturally into place with anamorphic. I find it much easier to compose.

Greenberg: Did you use the Primo lenses?

Goldblatt: No. We used the E-series, basically.

Greenberg: And did you choose them because the quality of the E-series was more appeal-

Produced by Pieter Jan Brugge and Alan J. Pakula Directed by Alan J. Pakula Director of photography, Stephen Goldblatt, ASC

ing? Or because of availability?

Goldblatt: Actually I think there were Primos available. I think they're too big, for one thing.

Greenberg: They are immense. And very heavy.

Goldblatt: I like to be able to get the camera handheld, inside a car, and in elevators — and you can't do that in a month of Sundays, not with the Primos.

Greenberg: I carried both when I did Free Willy — enough so that I could do the handheld sequences. I found the Primos were better, but I didn't do extensive testing.

Goldblatt: I inherited a very good set of E-series lenses. Frankly, I wouldn't have done the film in anamorphic if this set had not been available.

Greenberg: How [did you inherit the lenses!?

Goldblatt: Oliver Stone decided not to do Natural Born Killers anamorphic.

Greenberg: That's funny, because I inherited my set of Primos from an Oliver Stone film when [it] was delayed.

Goldblatt: I was very happy with the E-series. The only thing new to me was shooting a lot of the film at 5.6. Interiors — you know, really lighting.

Greenberg: What film stock were you using?

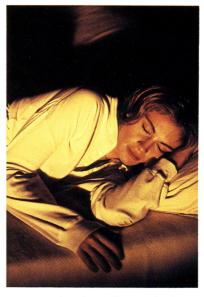
Goldblatt: We used 96, 93 and 45. And that's it.

Greenberg: Did you use the 93 for any of the day interiors?

Goldblatt: Oh yeah — a lot. One interesting thing is that I didn't use an 85 at all. I had done that years ago and corrected, but we used this LLD filter, low light, which works perfectly and the printing numbers are great. It cuts absolutely interchangeably between the 45, which is the daylight stock, and 93 with the LLD filter.

Greenberg: What's the correction on the LLD filter?

Goldblatt: Nothing. So you can have a 200 ASA daylight film, and a 500 ASA daylight film. It



was great — it really worked out fine. And [there were] other nice new things — we used the 20Ks en masse...

Greenberg: How many did you use?

Goldblatt: Four or five on occasion.

Greenberg: For the night ex-

teriors?

Goldblatt: Yeah. You're not worried about HMIs and gelling them, since they have a much nicer light and they're much easier to handle. I think they're wonderful. Especially when we did get into things like shooting at 2.8 on the scene itself, in an interior, and then getting into a big, big close-up, having to get on Julia Roberts [and making] it soft,



Goldblatt often used 5293 for daytime interiors, foregoing the use of an 85 filter in favor of an LLD filter.

at 8. We'd use the 20K with four diffusers or so. It was great — something you couldn't do before unless you were using arcs, which are such a pain. Especially out of town.

Greenberg: Absolutely. How heavy are [the 20Ks]?

Goldblatt: They're pretty heavy, but you don't need ballast, and they don't weigh what an arc weighs.

Greenberg: Without the 85, you didn't correct for daylight in the lab?

Goldblatt: No. The numbers are perfect. It really does work with the LLD. Now, if there wasn't the LLD you'd have to have much more correction. So that was interesting technically — if anything technical is interesting. (Smiles.) All it did was that when you got into trouble you could extend the day by an hour and get away with it.

Greenberg: How does the LLD filter work?

Goldblatt: I don't know. It just does. I used it for the first time on *Prince of Tides*, in Grand

Central. You'd never know [it was used]. Then there were all the obvious conversations about the look of the actors, but that's all story. Looking innocent, young and pretty and then going through an awful tragedy, obviously people change.

Greenberg: Yeah. It evolves in the story.

Goldblatt: No great brains behind that.

Greenberg: No. (Chuckles.)

Goldblatt: What was good though, is that Julia Roberts was very open about it. She's just seen her lover murdered. She knows she's going to be a screaming wreck, and she's perfectly happy to look like it. There was none of this "I want to look like a beautiful screaming wreck." Which I like because that always makes me nervous.

Greenberg: It affects the ultimate look of the film. No matter how good the cinematographer is, to light the actor for beauty only affects the look of the film.

Goldblatt: Yes, it affects everything in the film. And that

wasn't the case.

Greenberg: That's great — it would be sad if she was worried about that so young.

Goldblatt: It would be. But she's not, so I was very happy with that. Also I've got to say that Alan works, quite often, not with the actors in an improvisational way, but with the staging, in analyzing how we're going to stage something. . .

Greenberg: So the actors get the floor first?

Goldblatt: Not necessarily. He and I would often get the floor, just to see the creative and technical parameters. It's something I've not done in the past. Quite often it's a fait accompli, and God forbid that you should bring up the practical as part of the conversation. That's not the case with Alan. In fact, he very much wants to know what is impractical. Then, having had that conversation, I'll leave and the actors can have it, but he'll steer them away from that window or whatever the case may be. Normally with an actors' rehearsal, in

Left: A mood of mystery is enhanced by low, concentrated source light. Right: Law professor Callahan (Sam Shepard) in a pensive moment.



some situations they'll get locked into a performance or a staging that doesn't take into account the environment at all. It can cost you days, weeks, months. . .

Greenberg: And often the quality of the image. It can take longer to do less.

Goldblatt: If there's no consideration of what the camera can't do. In theory, the camera can go anywhere, do anything, and photograph anything in any condition. But in day-to-day work, that's not necessarily the best way to look at it.

Greenberg: Did you have to employ much Steadicam or remotecam?

Goldblatt: I don't like the Steadicam particularly, and I'm quite public about that. I'd like it better if I could see what. . .

Greenberg: Exactly. If you could put your eye to the finder.

Goldblatt: Yeah. But yes, we did. Sometimes Alan would ask if we could do certain things, and he was convinced while he was asking that it was impossible, but actually sometimes it was possible to do it quite easily. So we did a very nice shot, I think, on Bourbon Street, with Ted Churchill and the Steadicam, moving backwards with Julia as she's lost in the crowd. He stepped onto a Titan crane that took off. It didn't just go up, it took off and tracked, then boomed

up high and fast. So it becomes a *big* shot, quickly. I really enjoyed that. We lit Bourbon Street from one end to the other.

Greenberg: This was a night exterior?

Goldblatt: Yes. That's on 96, and the lighting took a couple weeks.

Greenberg: Were you able to hide lights in lighting the street overall, or did you have to use practicals on the street, or was it some combination?

Goldblatt: Combinations of both. On each intersection there'd be crosslight from one side or the other, and then in storefronts and things like that. And then, the famous Chinese lanterns. With a tall gaffer, you know. (Smiles.)

Greenberg: Walking down the street.

Goldblatt: Just to catch Julia's eyes here and there, and then Condors with ray beams, et cetera, et cetera. Three-quarter backlights. We had incredible cooperation from the city. Because basically we were rigging in that street for over two weeks to get it ready for that night. There were over a thousand extras and more than four thousand spectators. So it's a thrill to pull that off. Of course, it's a nightmare if you don't pull it off. But we did, and it was an important story point.

Greenberg: So all in all it was

a good experience.

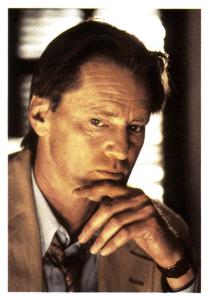
Goldblatt: Oh yes. I had a great time. I had a great crew. They were not thrown by anything.

Greenberg: Who was the grip?

Goldblatt: Georgie Patsos. Greenberg: An East Coast

guy.

Goldblatt: Yes, they all were. Colin Campbell, the gaffer, was the only West Coast person. A lot of fun was had by both camps. It was a great unit that didn't get upset by change, and there was a lot of change — all the time. Every film has its moments, of



course, especially a film this long. You can't expect anything else with so many scenes. We did nice things, I think, with people on phones. We would always shoot them, even if they were separated by weeks of shooting, with the correct eyeline, using video printouts. I used a video printer for the first time.

Greenberg: So you used the printouts to match the eyeline?

Goldblatt: Yes. From the camera.

Greenberg: And you found it beneficial?

Goldblatt: It was wonderful. Alan found it beneficial as well. In theory you can find the tape, flip back through the tape, and so on. But if you have a book — we

called them the "Books of Knowledge, presidential edition..."

Greenberg: So you basically were able to just match from both sides of the screen. . .

Goldblatt: Yes, exactly. And in terms of size and lens.

Greenberg: Along with records you had kept separately from that?

Goldblatt: No, I put everything there. If there was a gel on the lamp, I'd even take a bit of the gel and tape it onto the printout. It's a video printer attached inline to the video assist. Frankie, who did video assist, was to hit the button and give me a record through the lens.

Greenberg: So the way Alan played the scene, they maintained their eyeline when they were on the phone? It didn't go back and forth across the screen?

Goldblatt: Well, we matched the pretty intense conversations without doing split-screen or any nonsense like that. It's very clear who's talking. If we changed the size, there was a very good reason for it. I think I paid, for me, more attention than usual with Alan to the size of shots, and why and where they're looking. If we broke any rules, there'd be a reason for it. There was nothing casual about the setup. I really enjoyed it.

Greenberg: I did that only once — the video printout didn't exist, but when I did Sweet Dreams, it was done very similarly.

Goldblatt: It's an interesting way to work. It's educational if vou've not come up through that.

Greenberg: The information flows to all departments, everybody knows what's going on. It's

a good foundation.

Goldblatt: In many ways the information didn't flow to all departments, because of work style and also because of lack of preproduction. But even with preproduction, things change. And that's okay, as long as no one's screaming and shouting if those things change, and they weren't. I mean, why get upset





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Careful crew members exercise a soft touch as Roberts is hurled through a stunt scene.



about it?

Greenberg: That's right. We all have to grow up.

Goldblatt: It's not a perfect world. (Smiles.)

Greenberg: (Chuckles.) That's right. It's not a perfect world.

Goldblatt: It should be, but it isn't. That kind of attitude, combined with a top crew, people who are just technically unfazed—it's just wonderful. In every area. It makes a very interesting day. You can have fun with it. Technically, there's not much to talk about because words are words and pictures are pictures.

Greenberg: It sounds like a lot of attention was paid to the pictures — the intent of the pictures.

Goldblatt: Yes. A lot. And what they were saying in terms of the story.

Greenberg: Unfortunately, not much time is given to that in a lot of films today.

Goldblatt: That's why I like working with Alan. Because it's almost rigorous. There's a real analysis of what you're doing all

the time. Every scene is changed during rehearsal or during shooting, in terms of concept. Alan is so open to collaboration: people are always encouraged to come up with ideas. I've not experienced such a willing collaboration. I came to a realization: this is what it's about when you're making a film — that everyone is there to be used and to be encouraged. If that happens to me, it encourages me to do better work, and to encourage Colin and Georgie. I might say, "Listen, this has just come up, we've got to do a shot that's going up a stairwell, and can you rig a bosun's chair..." I don't ask them how they'll do it, I ask "Can you do it? And is it safe?" I like that. The crew is encouraged to look at videotape, because by the time you've shot the thing it becomes a pretty personal judgement by the director and myself. Input at that point, it's kind of, "enough."

Greenberg: So you didn't use the playback much — it was more used during the take rather than to look back at it.

Goldblatt: Yes. We'd play it back sometimes. It was always there. But we didn't shoot many takes, which makes an incredible difference. You can save the day by not shooting seventeen takes.

Greenberg: Did you find that because there were a lot of scenes, there were more complex blockings of scenes, so they would play in one shot, resulting in less cutting? Was there a stylistic effort that way?

Goldblatt: Quite often, yes. I like to do it like that anyway, and Alan definitely does. Not as much maybe as in Consenting Adults. Of course that wasn't such a photographic film. But certainly we like to do it like that. The coverage is intended to be specific. It's not 360-degree coverage — it's not a master, reverse master, medium shots, over-theshoulders, singles. It just doesn't work like that. It's specific closeups. I'm not saying that what we've done worked, but the intention was...

Greenberg: The intention is important in terms of how it feels

to be working on the film. That intention is key. For myself, when you do all that coverage, you don't feel like you have a vision. You feel like you're covering the scene, and then the editor. . .

Goldblatt: Will have a vision.

Greenberg: Which is always disconcerting. It's hard to get your bearings on a film like that.

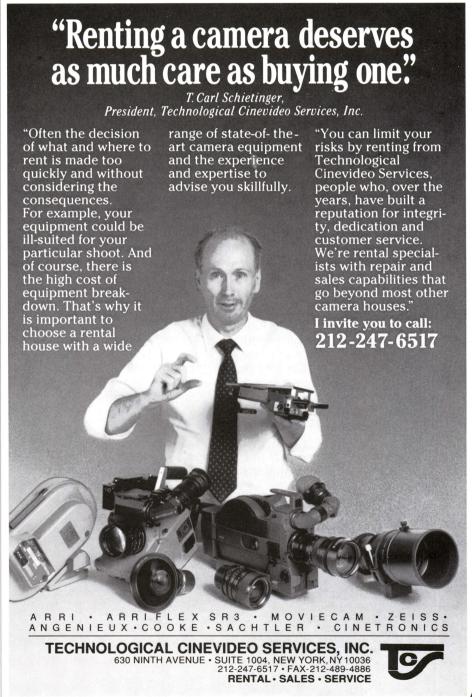
Goldblatt: I think, for good or ill, this film doesn't cut unless it is cut to the conception, because there's very little coverage around it. Hopefully it will work! In any case, it is a brave try. Not to discount the editing process, but what I'm getting at is that there's a point of view dramatically. The actors have definite points of view, about how they should play their scenes. The director had a point of view about the work, I had a point of view, and we all got together. I'm not saying it was easy all the time — it wasn't. Clearly it never can be. It's a struggle to make any kind of collaborative film. But at the end of the day, when you feel good and you love each other and you love the work, it's an experience. I won't forget this experience for the rest of my life, because it was really strong.

Greenberg: You'll be chasing after it for the rest of your life.

Goldblatt: Exactly. That sort of thing — you chase after the experience again. (Laughs.) But it is an ideal. Again, it doesn't mean that shooting was idealistic. It doesn't mean that we didn't have rows and tension and difficulties, but when it all comes out in the wash — and I'm not talking about everyone turning up with gold statues — I'm saying it's the work [that matters.] At the end, you're able to say, "Boy, it was interesting, and we were ambitious, we tried very hard." You feel good about it. You feel good about the people you worked with. And that's so much a part of the career, of the job.

Greenberg: I think we're all filmmakers at heart, or at least some of us are, and when the job





A tiny cart normally used for transporting sandbags enabled a camera crew to race behind actors in chase sequences.

is approached that way — when you feel that you are actively part of the plan, that you can see what the point of view of the film is, and you're satisfied that you're contributing — [it's satisfying.] Speaking for myself, I've been on films where there is no point of view. Because I believe that you should have a point of view, you struggle for the entire film trying to find it — just so that there's something in your work that is consistent to the story or helpful to the story. But it's surprising how often it doesn't exist, under the pressures of schedule, or the type of preparation, or script changes, depending on who the director is and how much power he has over studio influences. . .

Goldblatt: Or too many directors.

Greenberg: It's very rare. I've been doing this a long time, and I have one experience that I can equate to this. I've been searching for it ever since.

Goldblatt: Yes. It's not the usual experience.

AC: Is that because of lack of experience or skill in the ranks of directors?

Goldblatt: I don't know. There are some very experienced directors who are or were sons of bitches. I don't think it's easier to make films than it was 40 years ago or 20 years ago. From that point of view, of collaboration, I think it's probably as rare that a happy collaboration occurs now as it was 20, 30, 40 years ago. I think it's unusual.

Greenberg: It's a marriage of personalities. Also, it requires personalities that are developed enough so that the collaboration can exist and egos don't clash.

Goldblatt: And the people [have to be] mature enough to take it on the chin when they say, "Listen, it's a great idea, but you don't have the money, you don't have the time, and I'm sorry, but that's it." You've got to be able to say, "Well, that's too bad." You can mope a little bit, but you've got to be able to be cheerful the next morning at breakfast, be-

cause that's another day's work. You can't carry a grudge. I also think it's important that you act as a leader — that you're there for your crew and that they're there for you. You're both a creative person and, obviously, a technician, but you're working with



people. This isn't computer graphics, with you locked in a room by yourself.

Greenberg: You need to involve the crew, and listen and make them feel that they're valued at work each day, which they are. It's just that we've somehow managed to produce a lot of [people with] attitudes who deny that reality of the support of each department. But it's very important. It's amazing the difference you get from the crew when you acknowledge how valuable they are.

Goldblatt: It's not so amazing; I mean management skills from the military onwards . . .

Greenberg: Yes. Good management, though, is always hard to find.

Goldblatt: It is. From the military onwards. (Laughs.) Do you get shot in the back or does someone pin a medal on you? Here, a bunch of strangers comes together to work on some common project, and — I don't care how cynical people pretend to be — there's always some feel

for the project over and above money. And that's good.

Greenberg: And each one is different.

Goldblatt: Even if it's difficult working on a film, and there's tremendous tension between a cinematographer and a director — and this happens a lot — the cinematographer can still survive and be reasonably happy if his crew is with him and he's with them. In a sense you find a common cause. When you do feel alone, on the line by yourself, forget it. It's not worth it.

Greenberg: There's no money worth it.

Goldblatt: Psychologically, it's really something to experience, for four or five months.

Greenberg: It's a horrible feeling. I had tension once between myself and the director, and the crew was still on my side, but I found it the most uncomfortable situation I have ever been in.

Goldblatt: If you lose the crew, in a sense it's your fault.

Greenberg: Because you brought the crew. If you lose your own crew, there's something very wrong with your attitude.

Goldblatt: I have heard of situations where directors of photography have lost the crew, but had very close relationships with the director. It may be compensatory to the particular individual at the time. I couldn't bear to work like that. I think that the job is the closest thing to being a soldier and a painter in the same category. It's a very strange deal. Endurance, loyalty, planning, sometimes fighting. For example, on Pelican Brief, I went from flying ten feet off the water chasing pelicans at dawn and sunset to being involved in intensely political discussions about how the presidency should be portrayed for the story, to doing explosions, which is always a risk — it is a big canvas.

Greenberg: It's a great job, when it's good.

Goldblatt: The whole dy-

namic of a lot of humans working together is interesting.

AC: What is your response to the idea that foreign cinematographers have a novel take on photographing American locations?

Goldblatt: I think a New Yorker is as foreign to the rest of the country as an Englishman.

Greenberg: I think a good cinematographer is a good cinematographer no matter where he or she comes from. There is a perception that if you really care and you're American, you have an attitude. If you really care but you're not from America, you're a painter. It's a strange. . .

Goldblatt: It's stupid.
Greenberg: It's silly. When you're good, that's it.

Goldblatt: If a foreign cinematographer comes over here, he may be a great cinematographer, but if he really has an attitude, he's not going to last more than a few projects. No one wants to work that way. It's not worth it. There are good and horrible, and good and nice — which would you pick?

AC: How do you feel about the new wave of technologies that, we are told, will fundamentally change filmmaking?

Goldblatt: Some of it's very interesting. But this is the point: none of it changes the collaborative nature of the work. Whether you're recording onto hard disks, optical cartridges, or skeins of wool, it doesn't change the basic concept of story and picture. Yes, if I were selling high definition, I would say, "This will transform everything." But it's not true. It's absolutely wrong.

Greenberg: It will not transform what we spoke about this afternoon. Things may change on a technical level as to how the image is recorded, but. . .

Goldblatt: It doesn't change what we really have to do — the essence of the experience of making a film. Not an ounce.

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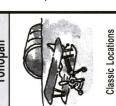


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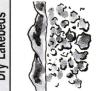
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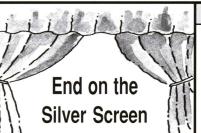
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When considering the ensemble of craftsman who make a motion picture, the most critical relationship without doubt is between director and cinematographer. Obviously the two have to be able to communicate efficiently in order to successfully complete a project, but [the relationship] goes much deeper than that. The way they work together can not only determine whether an idea makes a smooth transition from

his choice of Julia Roberts and Denzel Washington to play the lead roles. He had first worked with Stephen Goldblatt on *Consenting Adults*, after the two met at Sundance in Utah. Needless to say, they were quite pleased with the results of their first outing together. "Sometimes I feel like Stephen and I are attached at the hip," observed Pakula with a smile. "We think visually along very similar lines."

Another Angle: From the Assistant's POV

by Billy Heald

paper to celluloid, it can also set the working tone for the all the artists and technicians involved, and ultimately affect the quality of the finished product.

Being one of those technician types myself, I feel fortunate indeed that I recently had the opportunity to work for one of the most harmonious director/cinematographer teams around. The film was *The Pelican Brief*, the director was Alan Pakula, and the director of photography was Stephen Goldblatt, ASC.

I was enlisted as camera loader or, as Stephen jokingly referred to me, "camera scum." Goldblatt (along with Pakula) possesses a sense of humor that beautifully compliments his visual talents. This project turned out to be one of the most interesting and educational I have worked on, and one of the most enjoyable. I attribute this to the people at the top, who created a comfortable working environment. It's what we all dream of: a terrific project and wonderful people to work.

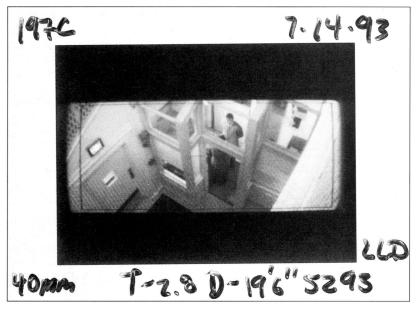
Pakula's choice of a director of photography to help bring John Grisham's best-selling novel to the screen was as critical to his creative goals as For *The Pelican Brief*, the decision was made to use the anamorphic aspect ratio, which offered some new creative possibilities. "Big story, big picture," mused Goldblatt. "It just seemed a natural for the anamorphic format. It gives such scope and flexibility to the compositions, which helped because we had to shoot so many rooms with people in them, and a lot of phone conversations with the actors in different places. So even though the characters often wouldn't be in

the same locations, they would seem to be in the same conversation when you cut between them. A lot of people don't like closeups in anamorphic, but I love them, because you can direct the eye to the face or the eye to the composition with the space that it gives you."

The start of principal photography found our eclectic crew (New Yorkers, Californians, Cajuns, retired pirates, and the odd Texan) in New Orleans. The city provided a colorful backdrop for Grisham's drama about a law student's paper chase to find the assassins of two Supreme Court Justices. The atmosphere and attitude of the city set the scene. Locations varied from brightly lit classroom interiors to the bustle of the Riverwalk on a hot summer day to dark, moody, bars (with attached laundromats) and the madness of Bourbon Street at

To handle these varying lighting situations, Goldblatt's choice of film stocks included Kodak 5245 for daylight exteriors, 5293 for day interiors and exteriors (where the 45 stock's 50 ASA rating proved insufficient), and 5296 for night exteriors and low-light interior conditions. As for color correction, the 85 filter stayed in the case for the entire show, and the Tiffen LLD was





of these devices on a pole, just out of frame. This got especially interesting during a few Steadicam shots (Colin is surprisingly agile for such a tall fellow).

Video assist played an important role during principal photography, and for *The Pelican Brief* a new wrinkle was added. As is common practice today, all takes were recorded on videotape for review immediately afterwards, providing a way for all involved to see the previous take for further evaluation. In addition to this, we had the capability of freezing any part of the tape and making an instant reproduction of what was on the screen. This gave us a perma-

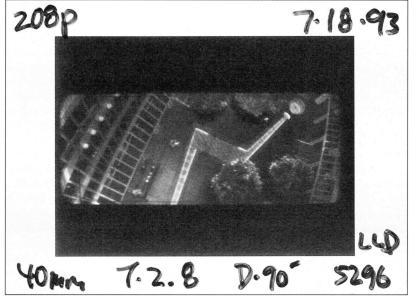
Both pages: Video assist allowed the filmmakers to see their setups in hardcopy pictures taken directly through the viewfinder of the camera. which helped solve problems in visual continuity and coverage

used when shooting tungsten with daylight illumination. For diffusion, we had a full compliment of Black ProMists and other filters, but they stayed in the case for the duration (nestled comfortably next to the 85s).

"My beef is about using filters," Goldblatt commented. "I don't like them. You have to have them as a standby sometimes, but you can do just about everything with light. I think a lot of filters and a lot of smoke is used when you could be more effective with the right kind of light from the right direction; actors who will work with the light; and wonderful makeup artists."

Stephen's lighting (combined with the makeup artistry of Robert Mills and Edna Sheen) resulted in gorgeous close-ups, and practically guaranteed an empty matte box for every setup. In addition, the wonderful lack of smoke meant the lungs of cast and crew were spared the "Rock Video Effect," which kept coughing during takes to a minimum.

Goldblatt followed his usual philosophy of "less is more." On several occasions a number of instruments would be called into play during rehearsal and blocking, only to be switched off right before the camera would roll. "What you turn off is often a great deal more important than



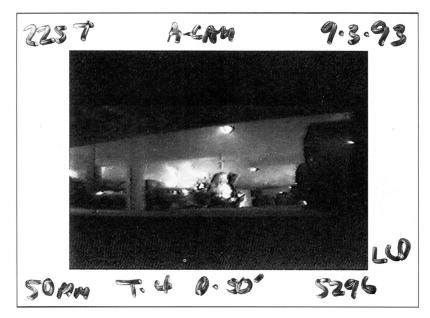
what you switch on," I heard Stephen say one evening, as he hurled my latest attempt at tea at Stunt Coordinator Doug Coleman (who lives for such spontaneous abuse).

The excellent latitude of the Kodak T-grain emulsions allowed great flexibility in establishing ambient backgrounds, and helped Goldblatt in balancing the divergent skin tones of Julia Roberts and Denzel Washington. Chinese lanterns with dimmers were often called upon for fill light, and gaffer Colin Campbell was occasionally seen pirouetting gracefully with one

nent hard-copy picture of every setup, taken directly through the viewfinder of the camera — a valuable resource indeed, which helped solve problems in continuity and coverage. These photos also proved their worth by providing a handy reference for matching during the inevitable round of insert shooting that was tackled after the completion of principal photography.

Naturally, there were some limitations to this type of photography, the most notable being a lack of exposure during low-light conditions. Because the source of the photo was the video

Heald was responsible for labelling each video still with the scene number, lens, stop, subject distance, film stock and any filtration that was used.



tap itself, only a portion of the light coming through the lens was available for the still video system to capture. Also, due to the anamorphic format of this film, certain cameras (like the Moviecam Compact used for Steadicam work) did not send an unsqueezed image to our video system. The resulting photos have a "circus sideshow" quality that slims the actors down to a striking, pencil-thin status reminiscent of '60s fashion models.

Part of my job was to catalogue these stills after video technician Frank Graziadei selected a particular image from each scene for printing. I would then label each photo with scene number, lens, stop, subject distance, film stock, and any filtration that was used. I also wanted to jot down notes on crew morale and beverage choices during the shot, but upon hearing this idea Mr. Goldblatt struck me with a focus whip.

While the majority of the camera moves in this film involved the liquid-smooth combination of camera operator Dick Mingalone and dolly grip Jimmy Pollard, there were a few specialized situations where additional camera magic was summoned forth. The Steadicam was used several times in a Modified Dolly Configuration (MDC), primarily

during chase sequences when the actors were pursued on foot by various perpetrators. By chaining Ted Churchill to a small dolly normally used to transport sandbags, the Steadicam could be used to stabilize the shot while key grip George Patsos and his Band of Brothers rocketed the tiny cart down straightaways and around bends that would have caused ordinary men to flee in terror. The resulting footage is hair-raising indeed, and I believe that dolly pilots Billy Patsos, Sean Finnegan, and Tom Saccio are now qualified for Grand Prix racing, if they tire of their day jobs.

Another image stabilization device we employed has become something of a rare bird these days, which is a shame because it is simple to use and quite effective. The Dynalens attaches directly in front of the lens on the matte box rods, and uses a series of fluid-balanced internal lenses to quell unwanted camera movement. It proved ideal when used on camera cars, especially when shooting with medium-length telephoto lenses. Its portable nature allowed us to install it quickly. The only drawback to the system is noise, as the unit has an interesting turbine sound similar to that of a jet engine coming to speed (on a lower intensity level, of course). While this was

ideal when we used the Dynalens at an airport location, the sound department did not share our enthusiasm about the machine.

Even though most of the shooting did not involve the use of auxiliary gadgetry, there were plenty of conventional shots that were tough to pull off. During a sequence at the Riverwalk, one setup involved an initial medium shot of a gun emerging from a pocket. The shot then zoomed into an extreme close-up of the character's face, as the dolly leads the actor along a moving ticket line. This was complicated by several factors, the most obvious of which was the limited depth of field offered by the 10:1 zoom being used at a very close subject distance. Combine this with a dolly move, and extreme temperatures that played havoc with the zoom motor, and you have a recipe for frustration.

It was absolutely critical that the actor not only maintain the same distance from the dolly as he walked along, but also keep his upper body absolutely still as well. Stanley Tucci, who played the character, was more than up to the job, and kept his position perfect for every take. First assistant cameraman Vinny Gerardo is a true master among focus pullers, and he too was able to nail the shot every time, maintaining his composure and concentration even during the periodic zoommotor failures.

This shot would have been made all the more difficult had we had not had a director with great patience, who fully understood the technical problems involved and who worked with the crew instead of antagonizing it (as so many love to do under such circumstances). This goes double for Stephen Goldblatt, who was fighting deteriorating lighting conditions on top of everything else and never lost his cool. Working for folks like this creates a loyalty among cast and crew that I believe shows.

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merebant & ivory on film: Ismail Merchant: "Being an independent filmmaker gives you the freedom to do the thing you most want to do. It can be an esoteric subject, an actor you wish to present in some new way, or a writer you believe in. There is the fascination of always learning and discovering something new. My advice to young filmmakers is to trust your dreams, and follow your ideals. Be passionate. Hunt for it. There will be obstacles, but never get discouraged. Persist. I rarely shy away from anything." James Merchout James Ivory: "Filmmaking isn't like being a painter, writer, sculptor, or composer. It's more like architecture. You can design a beautiful building, but you have to rely on a lot of people to help put it together. Filmmaking is a collaborative art. You have to enjoy yourself, make the films you believe in, and hope the audience agrees with you. I may have all kinds of unrealized dreams, but certainly no regrets, because I have always made my own choices and followed my own dreams."

Photo: © Douglas Kirkland, 1993. © Eastman Kodak Company, 1993. Eastman is a trademark

Ismail Merchant and James Ivory have collaborated on 33 films over a 32-year span. They are an inspiration for independent filmmakers everywhere. Their credits include "Shakespeare Wallah," "Savages," "A Room with a View," "Mr. & Mrs. Bridge," "Howards End," and coming this fall, "The Remains of the Day."

Motion Picture System



Schindler's List Finds Heroism Amidst Holocaust

Cinematographer exploits black & white's somber palette for Spielberg's World War II drama.

by Karen Erbach

Twelve years after arriving in the United States as a political refugee, Janusz Kaminski returned to Poland to photograph Steven Spielberg's stirring interpretation of Schindler's List. Kaminski came to Chicago in 1981 speaking only enough English to order himself eggs and toast. After enrolling in a language course, he moved on to study film at Columbia College in Chicago. He completed his education at the American Film Institute in Los Angeles as a cinematography fellow, and later served an internship with John Alonzo, ASC on Nothing In Common.

Kaminski seized the opportunity to shoot his first feature, Grim Prairie Tales, by coldcalling the production listing in the *Hollywood Reporter*. Since then he has gone on to shoot 15 features, including Cool As Ice, Wild Flower, Class Of '61 and The Adventures Of Huck Finn. Kaminski's longtime gaffer and friend, Mauro Fiore, also a Columbia College alumnus, flew out to Los Angeles five years ago on the hot prospect of gripping on a Roger Corman film, Not of This Earth. Kaminski and Fiore have worked together ever since.

Shooting for Steven

Spielberg unquestionably marks an acceptance into Hollywood and catapults Kaminski into a different league. How does one make the leap from low-budget features to high-profile projects such as Schindler's List? Kaminski replies, "Wild Flower got me the job. Steven watches a lot of television and caught Wild Flower, which was directed by Diane Keaton, on Lifetime. The next day I received his phone call offering me the TV movie Class Of '61. Looking back, I think maybe that movie was a test, because later I found out he had also been considering me for Schindler's List."

After the completion of Class Of '61, Spielberg and Kaminski met again. By then Spielberg had decided to offer Kaminski his next, very personal project, Schindler's List. The director solicited Kaminski's thoughts about shooting in black & white, and also asked the cameraman if he was comfortable doing a film that would undoubtedly garner international publicity. Spielberg encouraged Kaminski by telling him, "You just did a beautiful movie for Amblin in 22 days. It would be amazing to see your work on a 75-day shooting schedule."

And so it began. Spielberg, Kaminski and a fine international crew set out for Poland to film the inspiring and poignant story. Based on Thomas Keneally's book, Schindler's List is the true account of Oskar Schindler (Liam Neeson), a German Catholic industrialist whose membership in the Nazi party ironically helped more than 1,300 Jews escape extermination. A womanizer and heavy drinker, Schindler became an unlikely hero by taking over an enamelware works in Krakow and creating a benevolent and humane work camp for the Jews.

For Kaminski, the experience touched him on both personal and professional levels. "Here I am [after] 12 years in the United States, going back to the country where I was born accompanied by Steven Spielberg. I was ecstatic to be working with Steven, and yet when we began filming it brought home the sickening reality of the Holocaust. The newsreel quality of the blackand-white seemed to fade the barriers of time, making [the footage] feel like an ongoing horror that I was witnessing firsthand. I think I can speak for the whole crew when I say the experience was sobering."

Produced by Steven Spielberg, Gerald R. Molen and Branko Lustig Directed by Steven Spielberg Director of photography, Janusz Kaminski Kaminski expressed an initial pride in returning home to Krakow, only to be deeply discouraged by recurring anti-Semitic remarks aimed at the cast and crew. "Although I'd like to romanticize about returning to Poland, I realized that America is really my home," he says.

Kaminski knew for a year and a half that he'd be shooting *Schindler's List*, and he used the preparation time to learn more about black & white photography by studying books from that era. "I used *A Vanished World* by Roman Vishniac as sort of my bible. Vishniac photographed



Jewish settlements in the period between 1920 and 1939. I found inspiration in that book because this man, Roman Vishniac, had nothing — inferior equipment, inferior film stock and only available light — yet he managed to create really beautiful pictures with a timeless quality. When you look at the book you really don't know when the photos were taken except for giveaways like clothing and street signs and such."

Historical preparations were also important, and although the retelling of World War II genocide was part of Kaminski's education, he felt further study would only benefit his photography. "You try and get as close to the subject matter as pos-

sible," he says, "hoping that the knowledge will evoke the emotions you have about the period and will ultimately contribute to your creativity."

As the director and cinematographer were completing work on separate projects (Spielberg was directing Jurassic *Park* and Kaminski was shooting Huck Finn) they found time to meet and view films such as In Cold Blood and The Grapes Of Wrath. Kaminski points out that "although we discussed the styles and techniques of Conrad Hall and Gregg Toland, we were far from making creative decisions about Schindler's List. We primarily watched the work of others to see how style could create mood."

Once Spielberg and Kaminski were in actual preproduction, the time had come to finalize decisions, such as which film stock to use. Against studio hopes, the final print of Schindler's List would be black & white. The filmmakers had to decide between shooting on black & white negative or draining the hues from color negative. Spielberg wanted to colorize specific elements in certain shots, ultimately forcing the duo to utilize some color negative. Kaminski's big concern was whether the manipulated color would match with the black & white.

"After doing some tests we used Kodak color 5247 and 5296 to match with black-and-white 5231 and 5222, which are the only available emulsions," explains Kaminski. "We had to really fight with relatively inferior and dated film stock, basically because technology has changed but the film stock hasn't."

Kaminski worked with Don Donigi from Du Art to devise some tests. The first test Kaminski performed was to find out if a manipulated color negative could pose as black & white. "We had two cameras side by side with the lenses at the same focal length, shooting simultaOpposite: Under German edict, thousands of Jews are forced to relocate into a walled district of only 16 square blocks. This page: Strong side light lends intensity to a scene in which Oskar Schindler (Liam Neeson) and Itzhak Stern (Ben Kingsley) examine "the list."

Top: Director Steven Spielberg and cinematographer Janusz Kaminski (kneeling) film a point-of-view shot of what Jewish women saw upon arriving at Auschwitz Bottom: The resourceful use of light in this moody scene aboard a train was influenced by still photographer Roman Vishniac's chronicle of Jewish settlements in the book A Vanished World.



neously. One camera was loaded with 5296 color negative. The other camera had 5222 black-andwhite negative. Don printed the 5296 on color print stock but pulled out all the color. The black-and-white was printed on standard black-and-white stock. We set up the projectors side by side for viewing. The black-andwhite had a completely different quality than the drained color negative. The black-and-white looked much more realistic, with more grain, while the color had a faint blue tint."

Since Kaminski wasn't satisfied with the look, Don Donigi conducted another test. He explains the concept and results, in layman's terms: "Blackand-white negative film is made up of silver halide and printed on silver release positive. Color is made up of silver coupled with dye. When the silver gets exposed it ignites the dye, creating color images. During the bleach and fixing process, the silver comes out of the film and all that remains is the dye. When we tried to print the color/dyed image onto black-and-white release positive it was unacceptable. This is because the print stock is orthochromatic; all you pick up is the blue information of the negative. I decided to print the color negative onto a special panchromatic high-con stock which is sensitive to all colors and used primarily for titles. Because this high-contrast stock has virtually no middle greys, I altered the process in order to extend the grey scale."

Kaminski recalls his impressions of Donigi's tests:



"When I saw the results I was just blown away. They were so beautiful. From 5296 he printed it on this panchromatic stock and broadened the range. The results were amazing — no grain, no haze."

The next phase of testing involved filters. Kaminski explains how he was trying to brighten faces so that they'd appear white rather than grey: "Sometimes I'd succeed, sometimes I'd fail. I used yellow #15 and orange #21 to brighten skin tones. The principals in blackand-white are as such: if you have a red object and you apply a red filter, the red object will become lighter. Because most people's faces have a lot of or-

ange, when you apply an orange filter, it neutralizes the orange, making the face appear lighter. With red filters you have to be careful. We used red #23 on occasion, but the faces became too bright and the lips became too dark. Lips have a lot of blue in them and red accentuates this while increasing the contrast. Another technique was to 'overlight' the faces according to my meter; when we saw the dailies, they were the perfect tone of white."

Another concern for Kaminski was how black & white film would interpret color tones. "We began the tests with makeup and wardrobe. We wanted to know how tones in wardrobe would photograph, because we weren't dealing with color as a final result. But of course, color still had to be considered. "For

example, in color film green and blue have distinct differences, but in black-and-white they read the same. This is because they have the same tone. But this is not the case in red and blue. The color

red is not lighter than blue, but red stands out more in black-and-white because the *tone* is brighter. For this reason, tones became more important than colors. I worked with both Alan Starksi, the production designer, and Anna Biedrzycka Sheppard, the costume designer, to coordinate the tones, making sure that they were either brighter or darker than skin tone."

Kaminski thought he'd solved all his problems with black & white — that is, until shooting commenced. "We began to have problems with the negative discharge of electricity that happens only with black-andwhite because of the silver content in the emulsion. We would





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Schindler (Neeson) mingles with members of the Nazi Party to establish contacts.



have spots on the negative that looked like little dots with arms of lightning. Sometimes we would have lines running across the top of the frame like lightning in the sky. It's very hard to avoid, and we failed. I still don't know how to avoid it. I read some comments in American Cinematographer by Walt Lloyd, who shot Kafka, [and he said] that he had the same problems. Basically, the room has to be static-free. We'd spray the room and be careful when loading or unloading to avoid any friction between the winds of emulsion. Soon we realized that a lot of the static occurred at the beginning of the roll. So we'd shoot off sixty to eighty feet at the head of every roll, providing [some room] to protect ourselves. However, there's still some footage that has static and people will see it. I don't think it's terrible — the image is not ruined — but it's unavoidable. We were shooting under harsh weather and production conditions. All those elements contribute to static discharge."

Don Donigi at Du Art reports that he hears similar stories from other cinematographers. Donigi divulged some tricks brought back from the field. One involves placing a humidifier in the camera truck and blowing air to de-ionize the environment wherever film is loaded or rewound. The most original idea was sticking a damp sponge inside the camera unit, assuring moisture.

Kaminski also confronted the logistics of shooting in a foreign country, with all of the potential problems regarding equipment and manpower. Fortunately for Kaminski, he was able to bring with him longtime collaborators, some of whom spoke Polish. "I have a crew here in Los Angeles that I've worked with for five years," he relates. "Mauro Fiore has gaffed every movie I've photographed, and we've reached a point where he can light many of the scenes without much discussion between us. Steve Tate, my first assistant, will share credit with Stevie Misler, my second AC, who pulled focus on all B-camera and handheld shots. I also brought my best boy electrician, Jarak Gorozycki, whom I met at AFI and who, coincidentally, moved to America from Poland at about the same time I did. I was secure with the electrical crew chiefly because of Mauro and Jarak. I was a little worried about the foreign grip department. In general, Europeans don't use grip equipment like Americans, who are so specialized. If you want a little shadow on the wall, you've got the equipment. In Europe, if you want to create shadow you have to cut it from a piece of cardboard."

"Mauro was extremely helpful," he adds. "It's easy for me to say, 'I'd like some lights here, and some there,' but he's actually the one who had to deal with the logistics and the language problems." On one occasion, after Mauro had rigged a second-story interior with Condors and many lights, Kaminski turned to him and said, "That looks nice; now let's turn everything off." Then he turned to Spielberg and said, "Steven, this



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looks great the way it is. We have enough daylight for two hours. Do you think two hours is sufficient time to complete the scene?" When Spielberg said that it was, the scene was shot with available light only, negating all of Mauro's efforts. Most of the time, however, Kaminski found himself using every single light that Fiore had set up and then "kissing his hand" in gratitude.

Amblin Productions got its entire lighting and camera package from Arri. Kaminski used both the Arri 535 and the brand-new Arri 535-B camera. The 535-B camera is more lightweight than the 535 because Arri did away with all the electronics. It also has additional handles for easy transport. Arri made further adjustments for Kaminski, eliminating excess weight by removing the filter box brackets and adjusting the gate for the black & white film. Kaminski used the 535 as his "A" camera and the 535-B as the "B" camera. For Steadicam work, he employed the MovieCam.

Kaminski used Zeiss prime lenses, both Superspeed and standard speed, and felt that they were perfect for this film. "Because Zeiss lenses don't have as sharp an edge as the Primos, we got a very realistic look," he says. "In addition, the minimal focus [of the Zeisses] is greater than the Primos, which allowed us to come closer to the actors.

We usually shot our closeups at around 29mm, which is something I would never The reflection of a pensive Schindler is framed in an office window overlooking a factory of Jewish workers.

do if I wanted to glamorize. I usually use a 50mm or higher. But for this film, the 29mm seemed to provide a more realistic effect."

Kaminski arrived in Poland in January of '93, Spielberg arrived in February, and shooting commenced in March. As shooting began, Spielberg and Kaminski still hadn't discussed a specific photographic style for the film. "He gave me 100 percent free rein, which was really amazing for me," Kaminski says. "It was very exciting. Steven has always employed a certain mood, or those 'Spielberg touches,' but this movie has a completely different style than his previous films. Schindler's List was shot in a very crude technical manner. We were kind of aiming toward imperfection, little so-called 'flaws' that might be considered mistakes, such as handheld shots in scenes that would normally be shot on the dolly. Often we would set up the Pee Wee dolly and then have the operator, Raymond Stella, hand-hold while sitting on the dolly seat."

Kaminski saw a method in the "mistakes," an integrity that surpassed style and flash. "I approached this movie as if I had to photograph it fifty years ago,

with no lights, no dolly, no tripod. How would I do it? Naturally, a lot of it would be handheld, and a lot of it would be set on the ground where the camera was not level. We weren't making dutch angles and shots like that; that was not the purpose. It was simply more real to have certain imperfections in the camera movement, or soft images. All those elements will add to the emotional side of the movie. When people go to see this movie and expect to see a Steven Spielberg blockbuster, they will find something else — a dark and unobtrusive tone. The performance that Ben Kingsley (as Itzhak Stern) gave was so subtle that very often I would not pick up on the emotional impact until later. But Spielberg was guiding this story in his own way, and the dailies projected an emotional wallop that made us all uneasy in our chairs. You also have to remember that Spielberg has wanted to make this movie for ten years. Perhaps *Jurassic* Park closes one stage of his life and Schindler's List represents a new one."

Despite the freedom he allowed his cameraman, Spielberg still had some definite ideas about he'd approach some of the scenes. "For instance," Kaminski recalls, "there was one scene when Nazis raid a ghetto. Steven wanted a flash effect [to simulate] machine guns firing in the hallways, but he only wanted to see the shadows of the soldiers. We placed two separate strobes at different heights, and as you look down the corridor all you see is the shadows of the soldiers created by the firing machine guns. We used a similar effect during a courtyard raid. We had a camera set outside in a courtyard and we placed seven strobe lights in various windows. On cue, we would hit each strobe, giving the illusion of a massacre inside. That intercuts with the interior, where we see Germans shooting into the furniture, into the walls, and into the ceiling. The Jews would create fake walls

so that they could hide. The idea was that we would see the Germans firing into the wall and then cut back to the exterior to see the windows flashing. All the while we would see the Nazis loading exterminated victims into the trucks. Then we cut back inside the building to see blood dripping from the walls."

One example of Spielberg's colorization idea was a scene in a town square where hundreds of Iews wait for Nazi officials to decided whether or not they would receive a "blauschein," or blue stamp. The stamp would buy the Jews time by allowing them to work in branches of the Nazi industry that were essential to the war machine. Kaminski explains, "As the stamp is coming down on the document, Steven wanted the imprint to be a very faded blue. Everything else in the frame would remain black-and-white."

Spielberg also used colorization during a scene in which a little girl wearing a red dress is running through a raid. "He wanted the girl's dress colorized," Kaminski notes. "That image has something to do with how strange life can be. There is this beautiful little girl with blonde hair wearing this red dress and running through this madness, where Nazis are arresting, shooting and dragging people off the streets. The little girl just runs through the crowd and nobody bothers to stop her."

Kaminski says that surprisingly little planning went into the film, despite its broad scope. Spielberg had no storyboards, no shot lists and very often would show up on the set not knowing exactly what he would do that day. One of the tools Kaminski incorporated in order to keep up with the spontaneous energy was a small portable tape recorder, which he used to record his thoughts about lighting, problems or equipment he might need.

When scouting locations, Spielberg would sometimes get ideas on how he was going to

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the camera close to the ground. The only problem with this has been that I was limited to problem, giving pan, tilt and roll movement with the lense just inches from the ground." pan and tilt movements only. The introduction of the Roll-Axis Module has solved that "I have been using the Weaver/Steadman Head for years whenever I need to track with Our new Roll Axis Module is available at these rental houses:

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stage a scene. Kaminski would dictate those ideas and then later transfer them to the script so that he would be better prepared. "I'd make my comments to the lab, record what I'd done and what I was trying to achieve. Then later, when I saw dailies, I could compare my notes and see if I achieved what I wanted or if I failed. It was especially useful with black & white because I was still learning the medium. And on a daily basis I would make adjustments, either through my lighting, exposure or filtration."

Kaminski offered to share some of the verbal and written notes he had made about several scenes. What follows are excerpts from the original script, along with Kaminski's thoughts on how he would light the scenes.

INT. GHETTO APT — DAY

Clothes boiling on the stove in big pots stirred by a woman in rags; sheets hanging from the lines stretched across the room over a few sticks of furniture; children with coughs; the Nussbaums staring in dismay from the doorway.

SHOOTING: "Sunset. Man shaving in front of mirror on wall. The man is not lit. The wall reads f4. I expose at f2.8. As the Nussbaums open the door, Mrs. Nussbaum reads f4. I expose at f2.8. As they walk into apartment it drops to f1.4. As they go into the other room they stand in a strong pool of light. I backlight Mr. Nussbaum at f16. Mrs. Nussbaum will be a bit darker. When he turns to the camera he is the key at 2.8. To the eye the scene looks well-balanced."

<u>DAILIES</u>: "The scene was very contrasty. Moody. A sense of complete poverty and desolation. Not a pretty scene. I feel like the attention will be drawn to the "realness" of the situation and not to the photography."

EXT. COUNTRYSIDE —

DAY

SHOOTING: "A lockedoff shot of a German staff car driving by. Dusk. Light meter shaded from sky reads f1.3, the sky reads split f2.8/4. It's getting dark and I fear underexposure."

<u>DAILIES</u>: "Looked good. It always amazes me how much light is actually caught even though the light meter tells me that it won't work."

Although Kaminski did his best to prepare, there are bound to be mistakes when a cinematographer doesn't have a storyboard or shot list and must deal with 100 speaking roles and 30,000 extras. Kaminski recognizes them freely: "In one instance, I had a strobing problem. It was a big dolly shot that we will not be able to use in the final cut. We were just dollying past too many objects too quickly. But sometimes you get excited and forget how technical it is to be a cinematographer. Also, I wish some faces from certain scenes shot earlier were brighter. I was exposing as if I would be exposing color emulsion and relying on what I knew the best. It was the beginning of shooting, and being insecure [at that point] you always rely on what you know the best. I mean, it'll work for the average audience, but in my opinion it was a mistake. You have to be very honest with yourself and not listen to other people when they tell you it looks great. But you learn."

When asked about some of the most difficult scenes to shoot, Kaminski sighs as he reflects back on some of the interior factory scenes or night exteriors at the camp. "I was always worried about the factories. I'd never dealt with such a scope. I was not working with high-speed color emulsion; I was working with an emulsion with an ASA of 200. As I said earlier, if you expose blackand-white with the given ASA reading, you're not going to get the results you want, so you have to overexpose by putting in a lot of light. I would rate the 200 ASA as though it were 100 ASA, which meant that some nights we had every single light working."

Kaminski describes a particularly unsettling day: "There was a scene at Birkenau, where a group of women are being lead into a transfer room. They've been stripped of their identity and deprived of their privacy. Like those women, we don't know if they're going to live or die. They've been told they'll be showered and clothed in uniforms. But as we all know, very few got what they were promised. The Nazis liked to create a facade of normalcy to avoid a panic among the prisoners. Also remember that during the transport to Auschwitz and Birkenau, these people were living for days in tightly packed cattle cars, without food or ventilation. Spielberg had some specific ideas on how to handle this scene photographically. I placed single light bulbs on the ceiling and along the walls. When the women were led into the shower room or gas chamber all the lights suddenly shut off, leaving the women in complete darkness. There were screams for 5 to 10 seconds until a strong spotlight came on and pointed toward the camera. The light outlined the nude women crowded next to

each other, holding each other for comfort, not knowing whether they'll live or die. All of a sudden, the sprinklers came on and the water sprayed out. It's the most amazing scene. It's so emotional that even now, it's tough for me to hold a strong voice.

"What Steven did was to mimic Nazi sadism so that the audience, like the women, are in the dark, afraid for what could happen. It was not manipulative or sentimental. It was real. And the crew's reaction on the set was hatred — hatred for the ignorance that could do this to a group of people. But look, it's still happening in former Yugoslavia. Same stuff, fifty years later. What did we learn? Nothing. That's the purpose of the movie — to remind people that it's so easy to slip into the same thing."

One of the final scenes is the liberation of the factory and Schindler's final exit. His workers present him with a ring cast from their gold teeth. Inside the ring, the Hebrew inscription reads: "Whoever saves one life saves the world."

Kaminski describes the final moments: "We see an open field with puffy clouds. Hundreds of people are coming over the horizon toward us. The next shot is in color and in Jerusalem. It's a hot, dry land. We see hundreds of people again. But this time it's the *real* remaining survivors and their relatives walking toward us."

The next shot is in a Christian cemetery in Jerusalem, and the long line of survivors stretches toward the camera. In the foreground we see Oskar Schindler's grave. Each person puts a pebble on the grave, and the little pebbles eventually become a mass of stones piled high; it's estimated that the roughly 1,300 people Schindler saved have produced close to 10,000 relatives.

"It shows what one person can do with the power that they have," Kaminski concludes.

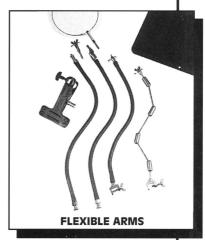
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Waging a Film in The War Room

Documentarians D.A. Pennebaker and Chris Hegedus deliver a dispatch from the front lines of Clinton's presidential campaign.

by Stephen Pizzello

In the world of documentary filmmaking, being in the right place at the right time is half the battle. While shooting *The War* Room, the New York-based husband-and-wife team of D.A. Pennebaker and Chris Hegedus hit photographic paydirt by capturing the behind-the-scenes tactics that resulted in the Democratic Party's first successful presidential campaign since 1976. Working with fellow filmmakers Nick Doob and David Dawkins, Pennebaker and Hegedus gained access to the Clinton camp's strategic command center, known as the "war room," and proceeded to record the political checkmate orchestrated by campaign chessmasters James Carville and George Stephanopolous.

The project marked the duo's somewhat reluctant return to the kind of politically charged subject matter they explored on their first project together, 1977's The Energy War, a five-hour, three-part PBS special that details President Jimmy Carter's long fight with Congress to deregulate natural gas. Despite the critical success of The Energy War (which has been called "one of the best political films ever made" by the Ĵohn F. Kennedy School of Government, where it is now part of the curriculum), Pennebaker cites the program as the chief reason for his hesitance to tackle another political topic.

"We shot *The Energy War* for over two years, and it almost broke us because it cost so much and we couldn't get additional financing from anybody," he re-

calls. "We had to see it down to the end of the wire, though, because it was the longest piece of legislation that had ever gone through Congress. You have to be wary of those 'lobster pots,' because once you get in them it's really hard to get out. We had two or three crews, and that's a have press divisions to cover those stories. So a political story is not one that you eagerly embark upon, because it's just not easy to do."

Prior to invading *The War Room*, Pennebaker and Hegedus, working under the banner of Pennebaker Associates



very expensive thing to support. In the case of a political film, the funding agencies are generally very wary; they don't want to be perceived as putting a lot of money into these things, because whatever the topic is, fifty percent of the people up on Capitol Hill are going to be against it. You have a real problem of perception in public broadcasting, but no one else is going to let you do these types of projects. Normal commercial television doesn't want us anywhere near them, because they fall under the heading of 'public affairs,' and they

(an entity which also includes Pennebaker's son Frazer), had collaborated on a film about jazz saxophonist Branford Marsalis. Their previous efforts together cover a diverse range of topics: Elliot Carter at Buffalo tracks the composer to a performance of his acclaimed "Double Concerto"; DeLorean is a pre-cocaine-bust portrait of automobile entrepreneur John Z. DeLorean; Rockaby documents the rehearsal and first performance of Samuel Beckett's play of the same name, written especially for the film project; while Dance Black America, a PBS

"Great Performances" installment, showcases a four-day festival at the Brooklyn Academy of

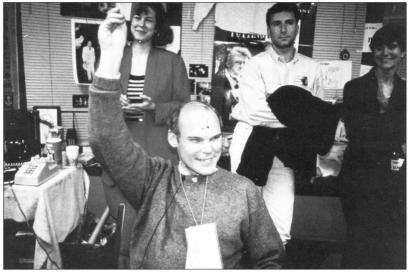
Music.

Pennebaker's acclaimed career began with 1953's Daybreak Express, an abstract five-minute piece about the Third Avenue El Train set to the Duke Ellington song. In 1959, he joined the Drew Associates, a group of filmmakers organized by Robert Drew (see separate piece in this issue's "Production Slate") and Time, Inc. to further the use of film in iournalism. The group, which also included Richard Leacock and Albert Maysles, helped

revolutionize the form of the documentary with its Living Camera series, producing such landmark films as Primary and Crisis. The Drew Associates also claim credit for developing one of the first fully portable

16mm synchronized camera and sound systems: Pennebaker and Leacock redesigned the movie camera so it would balance on an operator's shoulder, allowing him to create "handheld" moves. Over the course of five years, Drew's team would use such innovations to help establish and define a style of shooting that became known as "cinema verité," or "direct cinema," an unobtrusive, "you are there" approach that rejected the standard practice of voice-over narration in favor of recording real people and events as they occurred, with as little "direction" from the filmmaker as possible.

In 1964, Leacock and Pennebaker formed their own company, serving as distributors as well as filmmakers. Pennebaker's work during the 1960s, both with the Drew Associates and on his own, established his pattern of versatility: Jane





documented the Broadway debut of Jane Fonda; You're Nobody 'Til Somebody Loves You featured a trip to Timothy Leary's Millbrook; and Jingle Bells presented Robert Kennedy singing Christmas Carols with his family and friends. Pennebaker's biggest breakthrough came when he and Leacock were contacted by Albert Grossman, who wanted the duo to make a film about one of his discoveries, a young folk singer from Minnesota named Bob Dylan. The resulting film, Don't Look Back, broke box-office records for documentaries upon its release in 1967, and is today considered one of the seminal films about rock music and the burgeoning youth culture of the '60s. The film's success led Pennebaker to shoot Monterey *Pop*, an account of the festival that launched the careers of Jimi Hendrix (who provided an unforgettable image by burning his guitar onstage) and Janis Joplin.

Hegedus began her career as a cameraperson for the University of Michigan Hospital, where she documented the harrowing techniques of burn surgery. After moving to New York City in 1965, she began to focus on politically oriented documentary work. Hegedus first linked up with Pennebaker on a project that would become the critically acclaimed film Town Bloody Hall, compiled from footage shot by Pennebaker in 1971. Although Pennebaker thought that his footage, which features the infamous "Dialogue on Women's Liberation" between Norman Mailer, Germaine Greer, Diana Trilling and other prominent feminists, was unusable, Hegedus persisted and was able to salvage and shape the material.

Twenty years later, the team would find themselves similarly persuaded to attempt The War Room. Pennebaker and Hegedus were approached by a pair of neophyte producers, R.J. Cutler and Wendy Ettinger, who had decided that the somewhat surreal nature of the 1992 presidential campaign would provide perfect fodder for a documentary. "Somebody sent them over to the [New York-based] Museum of Broadcasting, where they saw Crisis and a couple of the films Chris and I had done," recounts Pennebaker. "So they

Opposite: Pennebaker and Hegedus track their political prey. This page, top: The star of the show, Clinton campaign strategist James Carville, celebrates imminent victory in the Little Rock war room on election night. This page, bottom: Communications director George Stephanopolous and Carville preside over the last staff meeting of the campaign.



came to see us, and asked if we'd be interested in doing the film. We told them, 'Well, the things you need are money and access." They said, 'Oh, is that all?' and went away kind of congratulating themselves. They did get us some money — not much, but enough to get us through the convention. And then between us we dug up about 3,000 phone numbers; they started calling everybody they'd ever heard of, and eventually managed to get us through to Stephanopolous. We initially wanted the film to focus on Clinton himself, but George said it just wouldn't be possible. So instead, we settled for the staff."

The compromise proved to be surprisingly cinematic. Assessing their subject matter, Pennebaker and Hegedus soon homed in on Carville and Stephanopolous, the two figures at the heart of Clinton's campaign. The latter's smooth, Ivy League style contrasted sharply with the distinctly southern, steamrolling charisma of Carville, whom political pundits dubbed "The Ragin' Cajun."

"James and George are kind of opposites, but they're opposites who have learned to play off one another," Pennebaker observes. "When they choose to, they make a very productive whole. I don't know whether they'll remain close friends all their lives, but they'll certainly always have respect for each other; that's partly what allied them in the first place."

In its completed form,

The War Room tracks Clinton's troops from the New Hampshire primaries to the victory celebration in Little Rock, Arkansas. Pennebaker and Hegedus ended

up shooting 33 hours of film over a total of about 15 days, but when they began work, they really weren't certain what the structure of the film would be. Hegedus notes, "Our original strategy was to watch a man be-

come president, and that evolved into maybe doing something on the Democratic Convention,

which really didn't pan out as being a whole film for us. So we thought, 'Well, the most interesting person we met at the Convention, by far, was James Carville.' We felt that watching him for the rest of the election would make a film."

Pennebaker adds, "I'm sure that the Clintons were always guiding James and George, but we never got any of that. It might have made for a fascinating story, but who's to say whether it would have made a better film or not? These types of films probably are stronger when they turn on characterizations rather than information. So you're always hoping that you'll get people who care about something and will see them plunging ahead in the face of difficulties. That's what really gets your sympathy and empathy. As long as you have the right characters, the film doesn't have to tell you the whole story. It would be a mistake for people to think this is *the* story of the campaign; it's just one of the stories, but we worked very hard to make the story work for a broad audience, not just for political junkies or for people who wanted to see what the Democrats were doing."

The filmmakers' first task was gaining access. According to Pennebaker, earning the freedom to shoot was a two-stage process. "George was kind of our patron saint in the beginning, and then later James got involved. They couldn't give us carte blanche, and they were always nervous that we were going to distract the staff; that was the biggest problem, because they had to be on momentary alert every minute of the day. Once we had gotten them to trust us, our goal was to try to keep out of peoples' way, because the more people who don't want you around, the more likely you are to get tossed."

The question of access dogged the Pennebaker team throughout their work, with the situation becoming more sensitive as Election Day approached. "When we got to the end of the

movie, in Little Rock on election night, we had to have all sorts of credentials and pins to follow James and George around," says Hegedus. "One of them was a Secret Service pin, which we were not able to get because they only distributed about five of them. So we would always have to be conning our way in and following our subjects very closely."

"We became very good at sneaking," Pennebaker agrees. "That's a real problem in these kinds of films. You can think, 'Well, if you knew in advance where you had to be, you could get all of these clearances,' but you don't have that kind of time."

Their working method hewed closely to the guidelines of cinema verité: stay unobtrusive and capture the action as it occurs naturally. Although one might think the Clinton staffers would be somewhat self-conscious with a camera in their midst, the filmmakers report that the chaotic nature of their work caused the campaign crew to forget about their guests in a hurry. "The majority of what we did was to try to determine which part of the chaos was interesting to film," says Hegedus. "Film is much too expensive to just keep shooting everything that happens."

Pennebaker generally handles picture, while Hegedus records sound. The former's camera of choice was the Aaton XTR. "Once I put my eye in the finder, the meter is there, you know where you are with the magazine, and you never have to remove your eye, which for us is a critical consideration. I generally used a 10-150mm Angenieux lens, but sometimes I opted for a wide-angle 5.6mm lens."

To capture the sound, Hegedus employed a lightweight Stellavox stereo time-code recorder. "I used it either with a mono mike and an audio-limited radio mike, or a stereo Neumann microphone. The sound recording was very, very difficult on this film because the war room was a large place with many,



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FAX (818) 843-7834 in CA (800) 692-6700 Nationwide (800) 325-7674 many people in it, computers all over the place, and three televisions going at once. It was hard to record what people were saying, especially because our approach is usually to give up a little bit in terms of quality so that we're not hovering over people the way the news media do. I'm never booming with the microphone; I'm usually coming from a lower angle and trying to be less obtrusive. One of the hardest situations for me came the very first moment we started shooting, in the Intercontinental Hotel in New York. That hotel has an air-conditioning system like the ones you'd find in old Howard Johnson's motels. It was overwhelmingly loud, and you can't open the windows or anything. To make matters worse, it was 99 degrees that week, and we didn't really know anyone well enough yet to put microphones on them. Eventually, we tried to put mikes on James and George as much as we could, but they had to do their jobs and we couldn't do it that often."

This "take what the situation allows" approach extended to the camerawork as well. Pennebaker used natural lighting almost exclusively. "In a really dark situation, I sometimes would put a bigger bulb in a lamp, but there was just no way I could increase the lamp light in the war room itself, because the staff would have just gone crazy. I did have a tiny 10-watt light that I used occasionally; I stuck it on top of the Aaton, and it ran right off the camera battery. In general, though, you just put the fastest lens on the camera and live with it. They can do quite a lot now with timing correction and so forth, and I'm just amazed at Kodak's 96 stock, which is a marvelous film. We went with the one stock exclusively, because I didn't want to run the risk of finding myself with the wrong stock in the magazine. So I just used one film and threw ND filters on the lens if I had to."

Pennebaker concedes that the whirlwind nature of

documentary work often makes image aesthetics a secondary consideration. In such circumstances, a cameraperson is forced to rely upon his experience and instincts. "You kind of let your feet decide what you're going to do," he submits. "You're always in a state of semi-anxiety, in which you're not sure what's going to happen, or if you're in the right place, or if you have enough film. You're looking for something to give you a clue, and when it's time to start, you just go. I generally watch Chris, because she's closer to the action and has a good feel for what's going down what's being said and where people intend to go. It's kind of a little dance we do; if she gives evidence of being interested, then I follow along. You don't really think too much about aesthetics — how big the subject should be in the frame, and so on — because you just don't have time for it. The composition is really unconscious. I don't ever stand there thinking about the alternatives; I just go where I have to be."

In order to maximize their coverage of the staff, Pennebaker and Hegedus enlisted the aid of friends and fellow filmmakers Nick Doob, who served as cinematographer on the Academy Award-winning documentary From Mao to Mozart, and David Dawkins, the co-director of Depeche Mode 101. Pennebaker Associates' 1990 foray into alternative rock music. "We probably couldn't have done this film without them," Hegedus says. "Both of them are filmmakers in their own right, which helps us. In order to stay on as small a scale as we do, we're the directors of our films, and in those circumstances we need to get people who are filmmakers and technicians also. You can't be there directing them when they're off somewhere on their own. They have to know how we make these films, and these two people really understand our style and methods. We'd mostly send them off to follow another character, so they'd sometimes be shooting George while we were shooting James."

Along the way, the two roving units captured a number of striking images: Carville ruminating to a reporter via telephone about his much-publicized romance with Bush campaign staffer Mary Matalin; Stephanopolous persuading a Perot worker that he would be vilified if he leaked a highly dubious rumor about illegitimate children supposedly fathered by Clinton: and numerous shots of Perot on television and in newspapers, lurking ominously in the background of the campaign.

Perhaps the most interesting coup was footage of an incident that the filmmakers now refer to as "the story that never broke." At one point in the campaign, the Clinton staff managed to get their hands on a foreign news report alleging that the Bush campaign had hired a Brazilian printing company to create \$10 million worth of campaign materials. "Clinton's people just went crazy over the idea that Bush was going to have all of this stuff printed in Brazil rather than the United States," recalls Hegedus. "They really thought they had won the election right then, but the press became cautious and didn't follow up on the story. When people are watching our film, their reactions to this non-story are very interesting; they invariably say, 'I don't remember that happening,' as if the incident couldn't exist because it wasn't on television."

Once filming was completed, the filmmakers began assessing their footage in the editing room. Pennebaker wanted to create a feature film, but decided that additional footage was needed to round out their story. Hegedus struck out to compile additional images. A key source was the team of Kevin Rafferty and James Ridgeway, who had shot an earlier film called *Feed*, which consisted of unseen images from television coverage of the 1992 New Hampshire pri-

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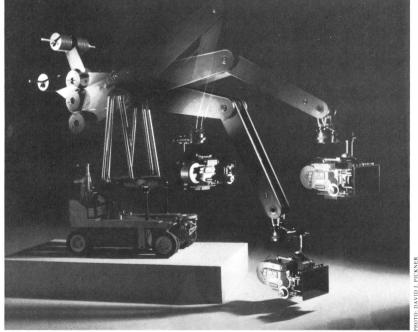
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mary. Pennebaker and Hegedus sorted through Rafferty's unused material and came up with some outstanding footage of Carville, including an inspired speech the political guru had delivered to a group of New Hampshire campaign workers. To further round out *The War Room*, Hegedus, Ettinger, editor Erez Laufer and assistant editor Rebecca Baron examined hours of archival news footage.

Pennebaker notes that the film might never have been completed without an assist from overseas. "The only money we got for this film, aside from the funds we raised privately from friends or the money that Wendy put in at the beginning, was from BBC England," he says. "They bought the show in advance and helped us get through the editing. We got nothing from public broadcasting or any of the funding entities that are supposed to encourage independent work; I think we were turned down by 40 foundations. Martin Scorsese and David Geffen gave us some money out of the goodness of their hearts. It's always a surprise when you know you have a winner on your hands and people still totally reject it. Of course, if the Democrats had lost the election, this would have just been a study film. I don't think we would have been enjoying theatrical success with it.'

Asked if their experience with *The War Room* had changed their perspectives on American politics, Pennebaker and Hegedus expressed a newfound admiration for those who volunteer their services for a cause.

"I felt very heartened," adds Pennebaker, "because I saw that there were a lot of young, dedicated people who were smart and were putting forth their best efforts for something they felt strongly about. This was a terrific thing to see; it made me feel that politics is really kind of an O.K. thing to do."

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Dear Friends:

On February 19 of 1994, the Artists Rights Foundation will host a Benefit Concert at the Shrine Auditorium. Lou Reed, Chris Isaak, Los Lobos, and other special guests will join us for this unique performance. The Foundation will pay tribute to cinematographer Floyd Crosby. His son David Crosby will join us for this special occasion.

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 $P_{\text{irate gold.}}$

The words alone evoke an electrifying thrill and suggest the alluring possibility of treasure chests buried in sand beneath clear water, half-open to reveal gleaming nuggets and sparkling jewels. Such treasure still awaits salvage at the bottom of the Caribbean Ocean. From 1492 to 1830 pirates stalked ships of the Spanish Main, loaded with plunder from the mines of Mexico and Peru, on their return voyage. Today hundreds of shallow-water

shipwrecks containing untold riches are strewn across the ocean floor, hidden from the naked eye but visible to those who can afford side-scanning sonar and other high-technology devices that let treasure hunters peer beneath the sand, or high-pressure water systems that blast sand from around the wrecks to reveal substantial residue, hopefully gold.

Salvors who employ environmentally damaging technologies in their hunt for treasure

face opposition from ecologists and historic preservation groups. Not only can some salvage methods harm undersea life, but plundering shipwrecks obliterates vital information that could shed new light on history, particularly that of the Spanish Main and pirate culture.

The wanton lifestyle that pirates embraced gave the swash-buckling capital of Port Royal, Jamaica the nickname of "The Sodom of the New World." The name suggests moral chaos and



Diving for Pirate Gold Plumbs the Depths

A Nova documentary submerges viewers in the romantic world of treasure salvage.

by Brooke Comer

positions piracy as a degenerate occupation. But in the 17th Century, pirate culture offered opportunity for advancement, freedom from a rigid caste system, and even the rough equivalent of an insurance policy: pirates who lost an eye or a limb in the line of duty were compensated by extra

shares of booty.

The same rewards that made piracy a viable career in its golden age (the mid-1600s through the early 1700s) make it appealing today, now that any-

one with the time and means can hire an expert to find a wreck and purchase the tools to invade a site. But there are problems. Some salvors finance their expeditions through limited partnerships and private investors, hoping that their finds will sell for high prices. However, this method of salvage-and-sell makes no provision that collections be properly documented or kept intact. Are individuals getting rich at the expense of history? Who owns our cultural heritage? Can wreck sites be protected? A recent Nova documentary, Diving For Pirate Gold, addresses these issues by taking the viewer on an underwater hunt for gold, into the archives of pirate history, and into an art auction where even priceless treasures have a price.

The documentary was conceived during a conversation between New York-based producer Larry Engel, whose company, Cineworks, co-produced the piece with Boston's WGBHTV, and *Nova* executive editor Bill Grant. The subject of modern sal-

vors intrigued them enough to negotiate a co-production which Engel would produce and direct under the supervision of executive producer Paula Atsell. Engel, having produced and directed such WGBH documentaries as Made in America, Living Against the Odds, Hurricane! and Tornado!, was a natural candidate for the job.

He amassed extensive research to create a flexible script for *Pirate Gold*. "Writing for an underwater documentary is tricky," Engel admits. "You don't know what you'll find when you get there."

Grant calls the dependence on underwater scenes the documentary's biggest challenge, but says that such sequences are more of a story obstacle than a technical obstacle. "When you're telling a story underwater," he explains, "you have to be able to see, and certain waters were too murky. Besides, this is a story about finding treasure underwater. We had to keep shooting until we found something. It's not the cheapest way to work."

Deep sea salvors locate "spikeshot," a unique cannon fodder, while diving for pirate gold. Pirate Gold not only explores the Caribbean wrecks and remains of pirate history that exist there. The documentary also visits England's Portsmouth harbor, where Henry VIII's flagship, The Mary Rose, was pulled up intact after 25,000 dives in one of the most elaborate and expensive marine excavations ever, and Cape Cod, where Barry Clifford found The Whydah, the only pirate ship ever excavated in America. The extent of underwater footage the documentary involved required the aid of three cinematographers: Engel himself shot live action topside, Peter Nelson shot interview footage, and underwater cameraman Adam Geiger shot below the surface. Rounding out the team were Nova's in-house associate pro-Stephen Sweigart; soundman Peter Miller; and picture and sound editor Steven Wechsler of New York's The Wechsler Group.

The production team traveled from England to Boston, then on to the Bahamas, where they spent four days aboard a professional salvage vessel belonging to Marex International.

"Wherever we were," says Engel, "we tried to do the underwater scenes first." Once that was out of the way, Engel could devote himself to topside shooting. "I have a tendency to work in documentary tradition," he explains. "I try at all costs to avoid bringing in lights. I use available light or fill in with foam core or a Flexfill to bounce light off the face. That keeps the interview more natural. It's bad enough to have a camera and a microphone sticking in someone's face and to ask them to pretend it's not there. When you start adding light, it's even worse."

Engel found that the Kodak stock (45 for exterior days, 93 for well-lit interiors and 96 for low-level lighting situations) offered "a wonderful range of control over the images, especially as we were going from negative to

videotape. With the marriage of negative and video, you have some wonderful creative choices, not only to fix your problems but to make your picture just right. That's why I'm beholden to Kodak and the electronics industry for letting me do my job so well."

Though Engel describes himself as "a person who doesn't dote on his camera," he has fond words for the Arri SR1 that he bought used in the '80s and still favors "for several reasons, but mostly because it [runs] after all these years." Engel and his Arri have survived wildfires in Yellowstone and a hurricane. "No matter what I do with it or where I take it," says Engel, "I can pick that camera up and it works." But with the advent of HDTV, Engel is considering moving into Super 16. "It's the format of the future for documentary work," he notes. "You'll see a resurgence of film, especially in nature work, to be archived for the future on HD."

Engel used a battery of lenses on the project, most often a Cooke 9-50mm for sharpness and his Angenieux 5.9mm. The wide-angle lens is a personal favorite that Engel used as often as possible (even though he admits it has some distortion), "because it offers a beautiful landscape; you can be absolutely on top of the action. It lets me put the camera in people's faces as the drama unfolds." The Zeiss Superspeed lenses were handy in low-level light, while a 300mm Canon T4 and another Angenieux 10-150mm facilitated long-end telephoto compression work.

The spur-of-the-moment nature of documentary shooting kept Engel on his toes. While Nelson shot interviews, "I'd anticipate where the scene was going, and depending on the flow, I'd change the lens. If it was humorous or quick-moving, I'd put on the 5.9." But it took anywhere from 10 to 30 seconds to make the switch, so he didn't get too lenshappy. Neither did he go over-

board with filtration, or in pushing the stock.

Nelson doubled Engel's assistant underwater, where Engel directed Geiger, and then as Engel's cinematographer topside. The young cameraman, who describes himself as "having graduated from assistant cameraman to director of photography," faced the challenges of keeping the gear safe from the corrosive humidity in the Bahamas (he used Silica gel to prevent fungus or rust), and of shooting while adrift. On-deck interviews, even in calm waters, created some shifting backgrounds. "It was tricky to look through the eyepiece and see your horizon changing," Nelson recalls. To compensate for the constantly changing horizon, he handheld the camera and changed the framing a bit "to keep a nicelooking frame that could be welledited.

As Nelson shot the crucial treasure scenes in which gold and jewelry were brought up and displayed, he couldn't help wondering who had been the last person to touch the artifacts, "considering that some of them were four or five hundred years old." The documentary hinged on the value of the treasure, so it was important to make the gold and jewels look their best. "The gold came out nice and glittery, because it's so photogenic," Nelson says. He arranged the nuggets on velour and lit them with fresnels and backlight for a luxurious look.

Adam Geiger's camerawork created some of the most riveting footage in *Pirate Gold*. The veteran director of photography has shot features, documentaries and commercials both above and below the waterline. His talent for underwater shooting has been established in no fewer than 10 water-related documentary films, including two featuring the only known pirate ship, *The Whydah* (*Cronkite at Large: The Whydah*, for CBS News, and *The Whydah: Black*

Bellamy's Gold for WCVB-TV). Cameramen often become specialists when fate pushes them into a specific type of work and repeat business keeps them there. But fate didn't push Geiger into the water; he jumped in all by himself.

"You have to enjoy putting your head underwater," he explains. "If you want to be proficient as an underwater shooter, you're going to spend a lot of time beneath the surface."

Flipper, Sea Hunt, and Jacques Cousteau were Geiger's inspirations. The New York native learned to dive during summers on Martha's Vineyard, and even in the limited visibility of the Atlantic Ocean ("It's not what people think of in terms of underwater beauty, but it's truly remarkable") he was fascinated with what he saw on the bottom of the sea. He got his first underwater camera at age 16. Degrees from Hampshire College (in marine biology) and Brooks Institute of Photography in Santa Barbara, California, helped Geiger weave together his interests in diving, marine science and camerawork. "When I'm underwater," says Geiger, "I know what I'm looking at."

Geiger used two Rebikoff 16mm cameras and a Kodak K-100 in custom-flexiglass waterproof housing when he submerged. The Rebikoffs have 9.5 lensing — a cylindrical tube with controls at one end and a lens and port at the opposite end. "They're non-reflex, so you have to learn what the camera sees by experience," Geiger explains. Bell and Howell movements were motorized and built into the cylindrical housing. "The nice thing about these systems is the Ivanoff corrective port. It's a wonderful underwater correction with very few of the aberrations that you find in concentric dome ports."

Though the cinematographer admits there are other options in terms of underwater cameras, he prefers the Rebikoff because it's streamlined, well-





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Pirate Gold's picture and sound editor Steven Wechsler at the controls.



balanced and easy to move in the water. The other options of the camera tend to be customized to users' needs. "Most people in this business tend to be tinkerers," he says, "and if they have the monetary resources, they'll build whatever they need to get the job done."

The Kodak K-100 had a 10mm lens with an aspheron, which gave it the equivalent of approximately a 5.6mm focal length in terms of coverage. "The Kodak K-100 is an old consumer camera, but other cameras are also available that can be put into housings," Geiger points out, citing the Arri SR-2, Arri S, Arri-3 and Arri 2-C, as well as various video cameras. He's used a variety of housings, but prefers the Hydroflex. "It's fairly simple, the controls are well placed, and it uses a somewhat unique sealing concept in which a vacuum is drawn on the housing as opposed to pressurizing it, which is the way many other systems are sealed. If you put pressure into the housing and there's a minor leak at the seal, you'll see a small stream of bubbles which alerts you to the problem. But the Hydroflex system draws a vacuum on the housing and works with the sealing surfaces to create a tighter seal right up front before you submerge."

Even given the perfect camera system, there are still

limitations and ramifications to underwater shooting, some of which don't necessarily involve camerawork itself. "You have a time limitation, based on air supply, depth, and environmental fatigue," Geiger explains. "Communication with crew and subiects is a problem, and you have no control, especially in a documentary situation, over what's going on in front of the camera. You have to roll with whatever comes your way." Sometimes, what's coming is too dark to be adequately recognized. "There's a real trick," says Geiger, "to lighting underwater."

Underwater lights are effective only at short range. "Within 10 to 15 feet of the subject they're useful, then they're not. In a controlled situation, you can use light as effectively as you can in air; otherwise, I try to use lights to fill or restore warmth to the foreground without [creating] a pool of light." Geiger likes to use lighting assistants rather than mounting lights on a camera "because of the backscatter; any particulate matter in the water column will reflect light toward the light source." If a light source is mounted on the camera or near the lens, he notes, "that lens will see tremendous amounts of reflected light." The further the light is moved from the lens, the less visible the backscatter becomes.

Underwater visibility relates directly to image clarity. Geiger works by an old rule of thumb that dictates, "Don't shoot anything that's more than one third of the water visibility away from you." He adds, "If you're looking for a sharp, clean image, the closer you shoot the better, because simply shooting in water degrades the picture quality. The less space between you and your subject, the less degradation." The clear water of the tropics provides greater visibility. When Geiger shot in the Bahamas, he got anywhere from 60 to 100 feet of visibility, but in the waters of Cape Cod 10 feet was the maximum.

To prepare for Pirate Gold, the director and cinematographer discussed what shots they'd need, exchanged ideas and came up with an underwater communication system based on sign language and slates. Geiger has plenty of experience shooting wreck sites. "After a while you become blasé about swimming through 350-year-old wrecks, with pieces of gold lying on the ocean floor," he admits. But there are dangers as well as gold in Geiger's job. "Rapture of the Deep," also known in old diving books as "Martini's Law," is described as a euphoria equivalent to the sensation that would be derived from drinking one martini for every 10 feet past the 100th. "I'm not sure it's the same feeling as being drunk, but it is a narcotic effect," says Geiger. "In my experience, the feeling can vary according to circumstances. In clear, warm tropical water it's very euphoric. In dark green, forbidding New England water, it can be a very anxious experience."

Even at lesser depths, hazards lurk. Diving off the Tongue of the Ocean in the Bahamas while working on another *Nova* documentary titled *Adrift on the Gulf Stream*, Geiger was 100 feet down in 6,000 feet of water when he met "some beautiful sharks." He kept his motions to a

minimum and his camera on the sharks. "Sharks are very cautious animals," he points out. "That's the reason they're still around." Geiger met his subjects with equal caution, which probably helps explain why he's still around.

Not all the dangers of the deep are organic. "Mailboxing," the means of sandblasting old wrecks to expose solid treasure, is achieved by large propellers attached to a boat and turning at fairly high RPMs. Geiger had to be particularly careful swimming around the propeller wash tubes on Pirate Gold, which featured mailboxing scenes. "If you're close to the bottom of the boat, you could be sucked in. If you get too close to the column of water, you can be caught and slammed into the sea floor."

Geiger likes to use Kodak 7248 or 5248 in his underwater scenes, "because the speed and the grain of the film provide a very good image and allow you to shoot either daylight or tungsten-balanced." As far as he knows, though, there is no specific stock designed for underwater use. He shot Pirate Gold with 45,93 and 96. Underwater shooting has distinct advantages: in a weightless environment, Geiger could do anything he wanted to do with the camera without any other equipment or crew; he could boom, pan and tilt by controlling his buoyancy and swimming with the camera. "It takes practice to move the camera smoothly underwater," he warns. "And you have to be a very accomplished diver to use the marine environment to your advantage." But for Geiger and other experienced underwater shooters, putting on diving gear and jumping into the water "is no different from being a director of photography on land and driving to a location. You don't think about it; it's second nature."

Diving skills were not only essential for Geiger, they were also a plus for New York editor Steven Wechsler. Because SILVERBEAM XENONS



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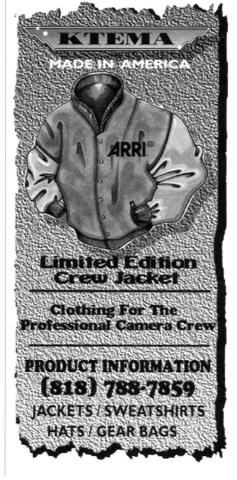
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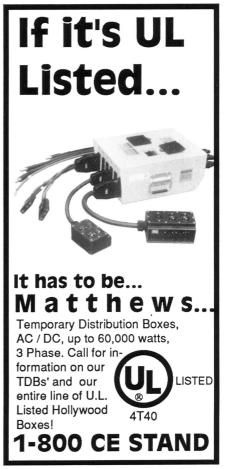
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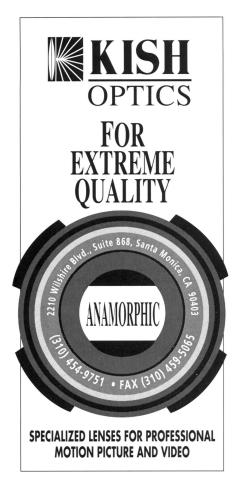
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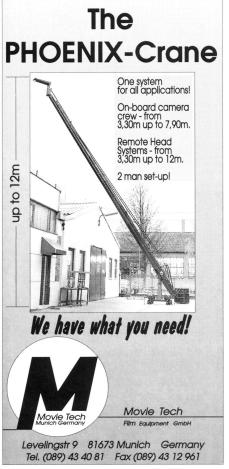
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of the diverse and extensive footage that the documentary required, Wechsler's involvement began in preproduction. Engel had worked previously with Wechsler, a scuba diver who had majored in art history. These credentials made him a uniquely appropriate member of the *Pirate* Gold team.

Before Wechsler put his fingers to the EditMaster, he'd given himself a crash course on pirate history and salvage strategies. He read up on pirate lore and the histories of sailing expeditions and delved into archives to determine the ship's routes and learn which ships were likely to be cargo vessels — and pirate prey. He also talked with treasure hunters ranging from pros at Marex International to "weekend warriors," individuals equipped with all the tools to track down treasure.

"Like most people," says Wechsler, "I thought wrecks were sunken ships found intact. But that's not the case at all." Wechsler learned that most wrecks are found in shallow waters where they hit a reef; ocean currents scatter the contents, which then become encrusted with coral and covered with sand. Research dispelled another myth for Wechsler: most wrecks don't have any treasure. Hundreds of wrecks do exist, but few of them are pirate ships or Spanish Galleons. The trick is figuring out which ones are, and where they are.

Informed by history and the tactics employed by contemporary salvage experts, Wechsler was ready to work. He read a preliminary copy of the treatment and script, and received film footage as soon as it was transferred to Beta at New York's VSC Post (each reel represents three rolls of film). Meanwhile he waded through "tons of material, including a tremendous volume of stock footage." Organization and careful logs were crucial. Interviews, which constituted a significant portion of Wechsler's material, had to be transcribed, then annotated and time-coded for easy reference and access.

Documentaries tend to be as challenging as their topics. "Some of the projects I've worked on are fairly predictable," Wechsler explains. "They have a specific focus. But this one involved so many different elements, it became a juggling routine to pack everything into a one-hour vehicle."

Pirate Gold came together in the cutting room. "We did start with a script, but when Larry went out on location with the treasure hunters, no one knew what the salvors would come up with. He'd keep the cameras rolling and wait." Wechsler had his own treasure hunt as he sifted through footage.

Even before he walked into the editing room, Wechsler had screened all the interview material, which constituted 30 percent of the 70 half-hour Beta reels he had to work with. Later there were 20 reels of stock footage to sort through. The editor looked for an initial thrust in the comments of experts in the field. "I wanted viewers to be able to understand pirate history from firsthand experience," he says. He also went through other source material to determine how to cut sequences in the show. "My first stab at the project was actually to cut sequences and then have pre-cut modules to work with." Wechsler used these modules as "building blocks" which he could reshuffle, expand or condense to form structural elements of the story.

Editors endure an agony specific to their work, one that is not confined to the pain of cramped neck muscles as they sit hunched over editing systems for 16-hour days. "We realized in screenings that we had too much material to fit into one medium," says Wechsler. The next few months were spent fine-tuning to decide what could be dropped or whittled down. "It's always a laborious and somewhat painful process to let go of some elements and give more weight to others," he admits.

More weight was given to the problem of pilfering from our cultural heritage. Profit incentive often overrules archaeological imperatives. "Some treasure hunters don't work with archaeologists, and their methodology is questionable," says Wechsler. "Their goal is to bring up as many valuables as possible as quickly as possible. Many objects go to auction or into private hands, and collections aren't always kept intact." Footage from the Marex International expedition examined the tactics of some "legitimate" salvors. The Marex group leased a site "about the size of Guam" from the Bahamas government, for which they paid 25 percent of the take. But not all salvors make ethics and ecology a priority, and it's impossible for any government to monitor every treasure hunt — factors which have persuaded the U.S. government to consider legislation that would restrict or ban treasure hunting.

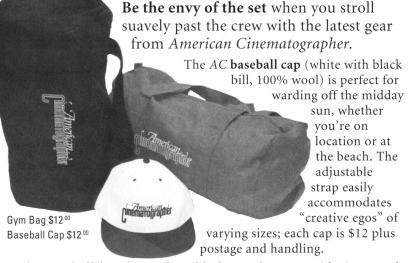
Several versions of the show were created to tell several different stories, but only one was chosen, and Wechsler still has regrets about two locations that ended up on the cutting room floor. Port Royal, Jamaica, which once attracted pirates the way Hollywood attracts starlets and is now a sunken "pirate city," presented the government with the option of an underwater park, where visitors could learn about pirate culture from glass-bottomed boats. Scenes from Port Royal, footage dealing with female pirates, pirate lore, and a pirate exhibit in London had to go. "As the show evolved, it took a different track," Wechsler explains, adding that enough material is left over to make another documentary. In the meantime pirate lore fanatics will be content with Diving for Pirate Gold.





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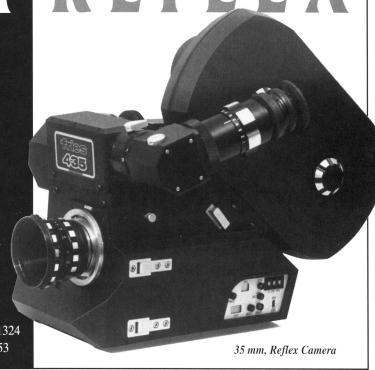
The 435 is a spinning mirror reflex camera with a 170 degree blanking shutter. The internal 30VDC motor runs the camera from 2 to 150 FPS forward and 2 to 50 FPS reverse, in one frame increments all crystal. The camera is equipped with take-up and supply torque motors.

There are both 1000 ft. and 400 ft. displacement type magazines. A new feature is the light valve which allows the operator to direct all the light to the viewing system, or to the video assist, or combo which splits the light between both viewing and video assist.

Fries Engineering designs and manufactures special effects cameras and conversions in 35mm, 65mm and Vistavision including high speed, time lapse and motion control.



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The Unflinching Eye of Frederick Wiseman

Filmmaking for a different purpose: to document reality without changing it.

by Gretje Ferguson

"Making a film is exhausting," says Frederick Wiseman. "You have to be in shape. I play tennis all year long and work out to be in shape to work on a movie, and even then I'm tired at the end of the day."

The veteran documentarian has lent his passionate energy to 25 documentary films that range from Titicut Follies (1967), the stark expose of conditions at the Bridgewater State Hospital for the criminally insane, to Zoo (1992), a casual visit to the Miami Metro Zoo. Working in his own version of the documentary style, Wiseman has made a series of films in which the location — not the characters — is the star. With a minuscule team consisting of just a cinematographer and an assistant, Wiseman, who does his own sound work, becomes the proverbial fly on the wall to quietly observe what we have all seen before, but in a way we have never fully experienced. A threehour sojourn through Central Park becomes a study in the essence of New York City (Central Park, 1989). A six-hour stay at the Medical Intensive Care Unit in Boston's Beth Israel Hospital (Near Death, 1989) plunges us into the personal, medical, ethical, and psychological questions arising from the terminal illness of a loved one. We witness the lives of the rich and famous at Aspen (1991), and watch the routine activities at the Belmont Race Track (Racetrack, 1985).

A graduate of Yale Law School, Wiseman made his first, most controversial film, *Titicut*

Follies, in 1966. Follies was banned from public viewing for 24 years after politicians declared the film to be an invasion of the inmates' privacy. The ban was finally lifted in 1991, and the film received network-level ratings when it aired on PBS that April.

"I thought it was absolutely amazing that there were no

per year, Wiseman chooses his subjects from a list he says is free-floating in his mind's eye. "An idea comes to me, I investigate it, I get permission, I go ahead," he explains. "I make a judgment that I think there's a film there, but it doesn't mean I'm right. Somebody else may disagree with me, and may not



considerations about the conditions at Bridgewater," Wiseman says now. "But here was all this fake concern for the damage the film would do to the inmates. If the state had really been interested in the inmates, they wouldn't have kept them in the conditions that the film shows."

Wiseman's films have earned him innumerable international awards, three Emmys, three Columbia-DuPont Awards, and in 1990, the International Documentary Association's Lifetime Achievement Award.

Making about one film

like the film. But I've finished every film I've started." Documentarian Frederick Wiseman shapes raw footage in the editing room.

For each shoot, Wiseman and a cinematographer — usually either William Brayne or John Davey, both longtime friends of Wiseman — immerse themselves in the culture they are filming.

"The experience is totally consuming," Wiseman says. "We get up at six or seven in the morning, shoot all day, drop stuff off at the lab, have a sandwich, and watch rushes until one or two in

the morning. We are always talking about the film, reacting to it in some way, or telling stories about the shoot."

Wiseman picks out what is to be shot and leads with the mike. The interaction is intense between sound and camera, with a constant exchange of

signals about close-ups, wide shots, special moments, or unexpected intrusions.

"It's like a little dance, and like any dance you

have to be tuned in to your partner," he says. "We communicate extremely quickly. The whole basis of the technique is quick decision. You have to move fast. If you miss the first 20 or 30 seconds of a sequence, you've missed the basic dynamics of the encounter. The technique and the equipment is all oriented towards speed."

For interior shots, he chooses Eastman EXR 7296 film for its speed (E.I. 500 in tungsten light), shot with zoom lenses mounted on an Aaton camera.

"I almost never add light," he says. "The most we do is change a lightbulb from a 40 to a 100-watt. We need speed because we have to be ready for anything. You might see someone coming around the corner in a funny hat, and that could be a transition that could help the movie."

These transitions also provide quiet moments and geographical links between one area and another, or may serve as character introductions.

"The whole thing is a big roll of the dice," Wiseman says. "That's part of the fun, because you don't know how it's going to come out. You are gambling that you have gathered enough footage to cut a dramatic movie."

Wiseman is known for his unblinking observance of harrowing scenes, such as the forcefeeding of an inmate in *Titicut* Follies, during which a naked man is strapped down and virtually impaled with a nose tube, or the autopsy of a baby rhinoceros in his latest film, Zoo.

Is there anything Wiseman would refuse to shoot?
"There have been a

"There have been a couple of situations where I [de-

My sequences are like little islands. I begin to think, 'This goes with that, that goes with this,' and they become archipelagoes.

cided] that people were in such distress that I shouldn't do it. And both times I ultimately came to regret that decision. It was completely inconsistent with everything else I was doing.

"When I was doing Hospital many years ago [1970], there was a man who had accidentally touched the third rail in a subway station. His family was around him in great distress, although he was feeling no pain because his nerve endings were gone. I thought, 'No, I can't shoot this.' But that was no different from another scene where someone comes in with his throat cut, which was one of the principal scenes in the movie. No logic that distinguishes each situation other than my emotional reaction to it."

After the shoot, Wiseman turns editor. He spends months and months on each film in his small editing suite in an upper room at Zipporah Films in Cambridge, Massachusetts, watching, absorbing, cutting, shaping.

The editing process begins after a day's shoot, with Wiseman and his small team reviewing silent rushes from the previous few days. The film is sent back to Zipporah Films for sound and picture synchronization and logged into an editing book by sequence. When Wiseman returns from the shoot, he settles down to review every

single frame of his hours and hours of footage.

"The beginning is particularly boring," he says. "With some films I have 60 hours [of footage], with others I have 100 hours, and I say to myself, 'What a mess — what did I get myself into?' But you have to be totally familiar with the material or you will not be able to make choices.

"I find that I have a good memory at an age when my memory for other things is fading," he continues. "I can still remember practically all the sequences in my films, and I can recite the dialogue. If I'm thinking about something and another sequence pops into my head, I think it might have some significance as to what I am editing."

As Wiseman edits each individual sequence, a point of view begins to emerge — but not until about six or seven months into the editing. "Then one day I will have on the table beside me lots of sequences in close to final form, and I will begin to think about how they connect to each other. I usually work out what is close to the final structure in a day or two. My sequences are like little islands. I begin to think, 'This goes with that, that goes with this,' and they become archipelagoes. Then, to carry out the metaphor, they get linked together and become a peninsula. But doing that is a consequence of having studied the material for the previous six or seven months, knowing it inside-out, and keeping track of my response to the material."

The last step in the almost year-long process is to review everything again — all 70, 80 or 90 hours of unused footage.

"I do that not only because I don't want to miss anything major that I've forgotten, but also because I always have a list of problem areas in the film. By going through the material, I may find little sequences that will solve those problems, such as introducing a character, creating a transition between sequences, or

clarifying an issue that was unclear. It takes a lot of time and it's boring, but it is an extremely valuable thing to do."

While he admits to a basic preference for working in black & white, Wiseman finds that the technological advances in color stock, along with their speed, make them a logical choice for his latest films. Some subjects actually cry out for color, he notes.

"In my film Blind [1986], color in a sense was a character in the film, because color was absent from the lives of the blind students. It was important for the audience to be able to respond to the color that the people in the school for the blind were not able to see."

He also shot *The Store* (about Neiman Marcus) in color, to show off the colorful merchandise, and used color for *Aspen* (shooting Eastman EXR 7245 film for exteriors, 7296 film for interiors) because of the bright atmosphere and ski clothing. Now, however, he admits that "*Aspen* would have been spectacular in black & white."

Wiseman is intensely loyal to his lab: DuArt Labs in New York City. "I feel extremely obligated to Irwin Young at DuArt," he says. "He is the independent filmmaker's friend. He's genuinely interested in independents' work and has helped me out since 1966."

Wiseman also has strong views about his relationships with his subjects. "I don't know if I remain detached," he says, "but I know that my primary job there is to make a movie, not to find new friends. I try to be friendly, but it's extremely important to be direct and straightforward.

"I don't think my job is to intervene in their lives. If I want to do that I should be a social worker or a philanthropist. I want to show the reality without changing it."





compiled by Chris Pizzello

Gyrostabilized Camera System

Spacecam has announced the introduction of the new Series II Spacecam Gyrostabilized Film Camera System.

The Series II includes a number of significant advances over its predecessor, enabling it to shoot both hard action and slow beauty. The fully adjustable gas suspension system provides stability and control under the most extreme flying and filming conditions. Also new are true windowless operation and a complete format lineup of camera systems (including 65mm) for helicopters as well as cranes, boats and camera cars. Spacecam's innovative helicopter nose/tail mounting bracketry is a first in the industry and permits much higher flight speeds and many new shooting options.

For information: Spacecam, 7022 Valjean Ave., Van Nuys, CA 91406-3914, (818) 988-2472, FAX (818) 988-2474.

Quicktime Movie Editor

Avid Technology, Inc. has begun shipping VideoShop 2.0, the leading QuickTime editor for creating digital movies and videotapes on the Macintosh.

Compatible with all QuickTime digitizing boards, VideoShop is the perfect tool for business communicators, educators, graphic artists and CD-ROM publishers who need a cost-effective solution to create short-form videotapes, interactive presentations and CD-ROM content. VideoShop sports an intuitive cut/copy/paste interface, and over 200 new special effects. With VideoShop, users can combine video, audio, text and graphics to create effective video pieces that deliver messages with impact.

Key new features of VideoShop 2.0 include a canvas interface which allows users to directly manipulate layers of video, add motion, and scale video size, shape and transparency; a built-in titling tool which lets users in-

put, resize and reposition anti-aliased movie titles, automatically scroll text and add drop shadows; and non-destructive editing, in which users can add and remove special effects, as well as change video clip size and position without committing to edits. A unique trimming model always retains clip media for later editing and re-editing.

For information: Avid Technology, Inc., Metropolitan Technology Park, One Park West, Tewksbury, MA 01876, (508) 640-6789, FAX (508) 640-1366.



Master Clock and Distribution Amplifier

ESE has recently introduced the ES-180A WWV/WWVH Master Clock. The new "A" version has several new software and hardware enhancements, including an improved accuracy to +/- 2.5ms of UTC when locked and <10ms/day drift when WWV is not present. Other enhancements include the ability to query the RS-232 output as often as 20 times per second and a larger .56" front panel L.E.D. display.

The ES-180A is capable of driving more than 100 digital slave displays as well as many other standard features which include five frequency scanning, automatic "2:00 a.m." DST correction, battery back-up, RS232C output, lpps and a.m./p.m. indication.

ESE has also announced the availability of the ES-2940 Dual 1 X 4 Audio and Video Distribution Amplifier and a five-output Black Burst Sync Generator, all with broadcast specifications and contained in a single rack height.

The unit is designed to meet the requirements of systems which must interface with, distribute and synchronize video and audio signals. While its largest use so far has been in interactive classroom technology applications, the ES-2490 is perfectly suited for post house editing bays and broadcast systems.

For information: ESE, 142 Sierra St., El Segundo, CA 90245, (310) 322-2136.

Camera System

Designed and manufactured in Australia by Aranda Design Pty. Ltd., the Rotavision Camera System is the first motion picture camera to be produced in that country.

The Rotavision System is a VistaVision format package comprising a fully featured production camera, built-in video assist, interchangeable viewfinders, six Zeiss prime lenses, 3-pin registration movement, co-axial (vertical) 1000-foot magazine, matte box with three filter stages, manual or remote focus drives, remote iris control, remote speed control, remote shutter control, remote zoom control and single-frame remote control.

The camera has 72,000 crystal-locked speeds with 'sync' confirmation at 24, 25, 30 and 50fps. A slave function allows any camera to be slaved from another, in perfect phase lock (six cameras may be locked together in this way), or a camera may drive or be driven by another device (a projector, computer, etc.).

Automatic speed/shutter and speed/iris exposure compensation is available using the remote-control systems. 1.85:1, 2.35:1, TV ground glasses and a film clip are part of the package.

Strobe lighting trigger, electronic jam sensing, low battery shutdown, polarity protection and glow are built into the electronics, as is a CRT monitor phase shift control.

The vertical co-axial magazines, a first in the horizontal, 8-perforation format, operate in forward/reverse and feature a 'threading chamber' which provides finger space for threading after

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a roll of film is placed in position. The magazines have a 'torque management' micro-controller and a memory which displays available footage when the magazine is apart from the camera. They also feature automatic roll size sensing.

Six cameras make up the rental fleet. Canon zooms and high-speed primes complete the inventory.

Rotavision has also introduced their Mitchell Super Motor, a multi-featured D.C. servo.

For information: Rotavision Camera Systems Inc., 2313 West Olive Avenue, Burbank, CA 91506, (818) 567-1399, FAX (818) 567-1320.



Visual Presenter

Elmo Mfg. Co. has introduced the fifth model to their family of visual presenters. The EV-500AF offers the latest technological features and conveniences for visual presentations and document capture for any presenter, trainer or video conferencing professional.

The Elmo Visual Presenter utilizes single-chip technologies that can display printed materials, charts, x-rays, negatives, transparencies and 3-D objects onto any size video monitor or front-projection system. The EV-500AF establishes a new standard of single chip technology which delivers 450 (H) lines of resolution with approximately 410,000 pixels.

Features of the new presenter include auto focus, a 10 X 1 powered zoom lens, R.G.B., S-VHS, composite video outputs, S-VHS inputs, stereo audio inputs, auto iris, auto white balance and a negative/positive conversion switch.

Also included is a remote-controllable interface along with top mounted lights and baselight for the display of transparency film, slides and negatives. All touch controls are located in the front of the unit for easier operation.

For information: Elmo Mfg. Corp., 70 New Hyde Park Road, New Hyde Park, NY 11040, (516) 285-3900, FAX (516) 285-3904.

Mini Jib

The new Media Logic Seven Jib provides up to seven feet of vertical movement and 53 inches of reach, yet folds to fit in any car. Weighing in at under 30 pounds, the unit supports up to 45 pounds of camera, head and accessories. Because the Seven Jib mounts on 100mm bowl tripods, no heavy dolly is needed and small crane shots become simpler and less involved.

The Jib will also interface with standard Mitchell mounts if dolly movement is required and sports a built-in tilt brake. The unit holds and levels 100mm bowl tripod heads; a 150mm adapter and an inexpensive underslung rig will be available shortly.

For information: Media Logic, 17 West 20th St., Suite 5 East, New York, NY 10011, (212) 924-3824, FAX (212) 924-3823.

Milliframe Controller

Tobin Cinema Systems has introduced the new TMC-55 Milliframe Controller, which controls the speed of compatible motion picture cameras, including the Arri 16-SR, 35-BL and others. This permits filming without a shutter bar from video and computer monitors, and flickerless filming at many speeds under HMI and fluorescent lights.

The Controller's .001 fps resolution up through 159.999 fps is unique among precision controllers of this type. Also unique is the informative decimal point which flashes red until the PLL (phase-locked loop) is locked, at which time it changes to a steady green to inform the cameraman that it is safe to begin filming. A phase button lowers the speed by 0.4% while depressed to manually move the phase bar to the bottom of the video screen.

The unit's case is 3.7 X 4.7 X 1.2 inches of machined die-cast aluminum alloy with a hinged rubber handle. Finish is baked textured black with epoxy screened white legends. A 30-inch cable with Fischer 11-pin male connector is attached. A chart on the rear of the unit gives all 60 Hz and 50 Hz HMI compatible speeds from 4 to 120 fps.

For information: Tobin Cinema

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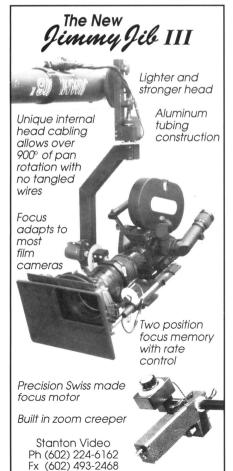
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Digital Broadcast Monitor

The AT-H1905D, the industry's first digital processing professional broadcast monitor, is now available from Panasonic Broadcast & Television Systems Company. Designed as a master monitor for quality evaluation at television stations or production facilities, the AT-H1905D completes the digital signal path for both production and postproduction applications.

The AT-H1905D 19-inch color monitor features complete digital signal processing for both composite analog and digital signals to maintain high-quality images. It offers digital luminance/chrominance separation via a five-line digital comb filter to reduce dot crawl on edge transitions. Digital chrominance signal processing ensures high stability.

The monitor is capable of four direct digital interfaces; serial composite and component, and parallel composite and component. The monitor has a pulse-cross function for displaying horizontal and vertical blanking — even from digital signal sources. The serial interface features an error detection and handling (EDH) check function to warn the operator of potential signal failures.

At the heart of the monitor is a newly developed CRT whose impregnated cathode provides high brightness and long life. The AT-H1905D's .28mm CRT dot pitch enables the monitor to deliver more than 900 TV lines of horizontal resolution.

The monitor has a micro-processed system control for onscreen

Left top: Panasonic's new digital processing professional broadcast monitor.

display of set-up data. An infrared wireless/wired remote control unit is also available. Other options include PAL decoder and an auto setup kit to adjust color temperature automatically.

For information: Panasonic

Broadcast & Television Systems Company, One Panasonic Way, Secaucus, NJ 07094, (201) 392-4319.

Signal Switcher

The SC10 System Controller, a new signal switcher with multiple inputs and RGB outputs, has been introduced by GE Projection Display Products Operation. The SC10 is designed to control any large screen video/data/graphics projector, including GE Imager and Talaria Projectors.

The SC10 can link multiple input sources with a variety of video and audio receivers. The modular design allows custom configuration, so users may choose up to 10 inputs and one to four RGB outputs.

A key distinguishing feature of the SC10 is its RGB output capability, a rare feature among signal switchers. Optional input modules allow the SC10 to accept all standard video signals (NTSC, PAL, SECAM), as well as RGB, SVHS and VGA sources. A projector or monitor can be linked to personal computers, VCRs, laserdisc players, video cameras, document cameras, GE Imager Video Visualizers and other sources.

All picture functions can be controlled using the SC10, either with the optional infrared remote controller or the controls on the switcher itself. Power on/off, RGB gains, sharpness, color, tint, picture mute, audio mute and volume all may be adjusted.

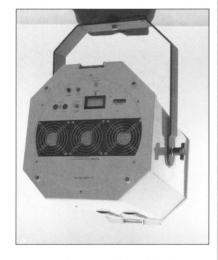
The SC10 provides for simple switching from one input source to another, thus making multiple input presentations less complicated. In addition, audio follows video with a touch of a

button

For use with a video projector which has its own wired remote controller, the SC10 includes a jack for direct connection. For projectors which have no independent remote switching capability, it represents the only way to switch signal sources from a remote position.

In addition to projectors and monitors, signals may also be sent to audio outputs such as amplifiers and speakers, with the proper optional output modules. Bandwidth rating for the SC10 can be as high as 200 MHz, depending on the input used. The SC10 weighs 17 pounds and includes a rack mount kit.

For information: General Electric Company, Projection Display Products Operation, Electronic Park 6-338, P.O. Box 4840, Syracuse, NY 13221, (315) 456-2152.



Compact Searchlights

L.P. Associates has introduced the first xenon searchlights in which the fixture and power supply are integrated into one housing. The system includes the compact 1KW, 2KW and 4KW searchlights.

The Xelamp Compact Searchlight product line offers improved system mobility and has reduced the amount of labor required for production setup. The searchlights require only one connection to the power source before being ready for operation. The standard 125-pound head feeder cable has been eliminated. Because they weigh 100 pounds less than traditional searchlights, they are easy to position for stage work or location

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Points East

by Brooke Comer

New York City is known as the best backlot in the world. TriStar Pictures' *Cop Gives Waitress \$2 Million Tip* found this to be the truth when they shot critical scenes in TriBeCa (TRlangle BElow CAnal Street).

TriBeCa is a microcosm of New York; in few other parts of the country can you find a boarded-up spice warehouse next door to a chic café next door to a zipper factory next door to a European coffee bar. "New York is all mixed up. It's a juxtaposition of unlike things," says Bill Groom, New Yorker and production designer for Cop Gives Waitress \$2 Million Tip. Groom supervised the building and decoration of a coffee shop that provides an integral setting in the film. In fact, the cozy charm of the decor may be a bit too realistic; the faux eatery draws a constant flow of wanna-be customers who are always disappointed when the security guards tell them they can't come in for lunch.

Groom, whose design credits include A League of Their Own and The Good Son, always works from "a guiding idea, and then things fall into place." He likes to explore the feel of each film. "Once I get beyond the first read, I read again to look for specific problems." In this film, the coffee shop represents the local community. Bridget Fonda plays Yvonne, a waitress. One of Yvonne's customers tips her with a promise: if he wins the lottery, he'll give her half his winnings. Naturally, he does win. Yvonne uses her share to buy the coffee shop and to instill it with "heart," in the form of quaint memorabilia.

The big question was where to find a coffee shop that could fit the parameters of a film shoot and match the aesthetics determined by the script. Groom and his team scoured downtown Manhattan. "We wanted a sense of the city, but we didn't want to be on the busiest, noisiest corner," he explains. The chosen spot was perfect: western and eastern exposures revealed the desired

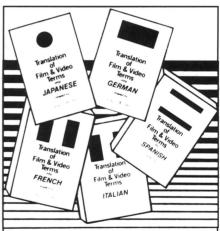
traffic scenes; the Empire State Building is visible from the north; and the World Trade Center stands high to the south. "It's on a little corner, an out-of-the-way corner in the middle of a busy city," says Groom. But "it" didn't exist until he built it. When it was chosen, the set's site was a parking lot where New York City Film Commissioner Richard Brick had parked his car for years. The lot's owner rented the space to the film company "for a reasonable fee," and construction on the coffee shop began.

"It was expensive to build the coffee shop from scratch," Groom admits, "but it would also have been costly to shut down an existing coffee shop for a couple of months. We decided building was the smart thing to do." By law, an architect had to approve the plans in order to receive a building permit, even though the structure was temporary, and city law required that sprinklers be installed.

There were several key considerations: the crew needed the ability to light, to store equipment and keep it off the sidewalk, and to have the physical freedom to move around inside the coffee shop. "By building the place ourselves, we could do things we couldn't do on a practical location," says Groom. Walls were framed in traditional scenic techniques with breaks, so that they could be moved out to accommodate camera angles. Exterior walls had the desired windows, and ceilings could be removed for overhead lighting. If the production ran into scheduling problems and needed an extra week or two, Groom notes, "We weren't tied down to a specific time when we had to be finished shooting. We had more flexibility."

There was another option. The logical "Hollywood" solution would be to build the set on a stage, "but then we'd sacrifice the reality of the street," says Groom. "We wanted to be able to shoot through the windows and see traffic moving. You compromise all of that when





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you go on a stage. One reason you shoot in New York City is to take advantage of what's here. Movies with this sort of set that are shot on a stage often end up looking claustrophobic and closed-in, because you have to avoid what's outside those windows."

The actual structure of the coffee shop is larger than it looks. "We manipulated the shape of the exterior to hide additional interior space," says Groom. Part of the exterior is faced with a facade that looks like an old warehouse building, but is actually brand-new and contains offstage storage space. The "old warehouse" was built to look as if it had been rusting away since the turn of the century. An old "brick" wall looked so convincing that during construction a neighbor asked if she could have some of the bricks to build bookshelves. Not until she actually touched them did she believe the bricks were just a facade.

Decorating the interior of the coffee shop was a set dresser's dream. "We wanted to create the sense that this is a place where people not only go, but that they come back to," says Groom. "It's a welcoming environment." After Bridget Fonda's character comes into her millions, the atmosphere shifts from "generic coffee shop" to Yvonne's coffee shop, a place imbued with her unique personality. "There's a real homeyness with the old kitchen tablecloths, each one different, and a mix of old country chairs. Her taste is eclectic. She'd never go out and hire a restaurant designer to redecorate. She'd bring in inexpensive but interesting things.'

Production kicked off with a block party so the crew could make friends with the TriBeCa neighbors. "Everybody was happy to see the filming going on," says Groom. Everybody, that is, except perhaps the man whose view was blocked by the "turn of the century" warehouse. But his temporary proximity to the star-studded cast made up for the inconvenience. Other locals were enthusiastic from the start. One woman whose apartment was nearby offered to rent out her bathroom as Bridget Fonda's private powder room. What happens when the show's over? "The shop comes down," says Groom, "and the location becomes a parking lot again."

by George Turner

Forties Film Talk

by Doug McClelland MacFarland 447 pps., cloth, \$49.95

The price of books keeps going up and Forties Film Talk is pricey enough to give one pause, but it's easy to get hooked on its vast collection of interviews with and quotes from some of Hollywood's finest from the Forties. This is, in fact, one of those rare works that truly justify that well-worn huzzah about a book that's hard to set aside once it's been opened.

The first 191 pages are excerpted from exclusive interviews by the author; the balance is made up of shorter guotes from other sources. McClelland. who has been doing this sort of thing for a long time, has mined some rich nuggets, mostly from actors, writers and directors. Although no cinematographers were interviewed, there are numerous references to them throughout. Rouben Mamoulian, for example, realized in the middle of directing a Technicolor musical that the cinematographer (Charles Schoenbaum) was color blind and the sound supervisor was deaf. Names such as James Wong Howe, Joseph Ruttenberg, George Barnes, Gregg Toland, Milton Krasner, Arthur Miller, Burnett Guffey, Bert Glennon, Lee Garmes, Byron Haskin and Ted Tetzlaff crop up here and there. A poignant example is a comment by Joseph Cotten: "Portrait of Jennie had finally come to an end, if an end it ever had. Joe August, our brilliant, incomparable cameraman, our master of ethereal light, as much our inspiration as anyone (even director William Dieterle vehemently conceded this), walked into producer David O. Selznick's office and said. 'I think it's finished now. I'm satisfied.' He went over to the sofa. lay down and with a hauntingly beautiful smile on his lips, closed his eyes and never opened them again."

Much of the book's charm derives from the fact that many of the

interviewees are real pros whose views haven't been widely heard.

The Technique of **Special Effects** Cinematography

Fourth Edition by Raymond Fielding Focal Press 442 pps., cloth, \$38

Professor Ray Fielding's pioneering The Technique of Special Effects Photography, the first English-language book on the subject, was originally published by Hastings House in 1965 and revised in 1968, 1972 and 1985. Numerous reprintings, the latest in 1992, have kept it available, which is the excuse for our retrospective look. Naturally, the tome stops short of covering the revolutionary accomplishments in computer/ digital effects during the 1990s, but that's a different ballgame.

Because the book is aimed toward the production cinematographer rather than the dilettante, much of it deals with effects normally used to provide movies with production values their budgets wouldn't otherwise permit. This important aspect is pretty much ignored in the more fan-oriented works on the subject, which usually are concerned solely with the razzle-dazzle of sciencefiction epics. Fielding's book is less a fun read than a textbook — but in the best sense of the word. Glass shots, mirror shots, in-camera matte shots, bi-pack mattes, optical printing, traveling mattes, aerial-image, rear projection, front projection, miniatures, motion control, and some aspects of electronic/computer imaging are covered very well. All of these techniques can contribute to the creation of both fantasy and visual reality in the cinema.

There are a lot of excellent photos from many sources. The only squawk from this corner is that most of the people in them are not identified. The extensive bibliography, 25 pages of small

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Ernst Lubitsch: Laughter in Paradise

by Scott Eyman Simon & Schuster 413 pps., cloth, \$25

"As the first German to emigrate to Hollywood after World War I," says Scott Eyman, Ernst Lubitsch was "the point man in a brain drain that, over the next ten years, would decimate German film." The celebrated actor-directorproducer came to America in 1922, well ahead of Paul Leni, Conrad Veidt, Karl Freund, Wilhelm Dieterle and Theodor Sparkuhl, and still longer before the arrival of such later luminaries as Fritz Lang, Robert and Kurt Siodmak, Billy Wilder, Joe May, Bert Brecht, Peter Lorre, etc. Lubitsch had been hailed as "the Griffith of Europe" because of costume epics that included The Eyes of the Mummy Ma, Carmen, Madame DuBarry, Sumurun, Ann Bolevn, and The Loves of Pharoah. Between spectacles, he made society comedies. In America — after a rocky time with an incompatible Mary Pickford making Rosita, followed by a shaky start at Warner Bros. — Lubitsch made the romantic comedy *The Marriage* Circle, forerunner of the silken romantic comedies for which he became most famous. "The Lubitsch Touch" became a byword for subtly sexy, sophisticated comedy.

Eyman covers all of this, as well as everything that followed until Lubitsch's 1945 death, in a journalistic style that is admiring but not worshipful and refreshingly free of either sensationalism or pedantry. Among the salient features of this highly recommended book are the making of classics such as The Patriot, Forbidden Paradise, The Student Prince, The Love Parade, Monte Carlo. Trouble in Paradise, Ninotchka and To Be or Not to Be; Lubitsch's occasional failures and his problems as producer of Dragonwyck; his years as head of all production at Paramount; and details of his family life.

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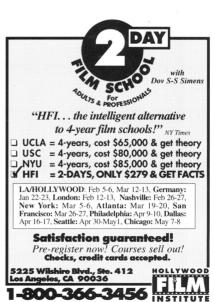
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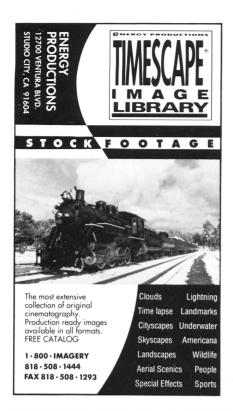
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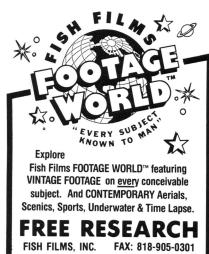
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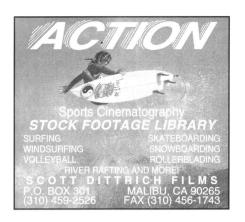
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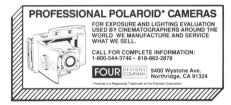
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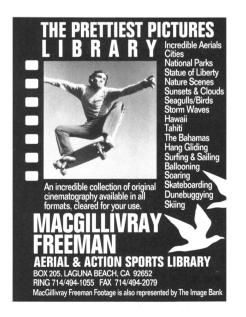
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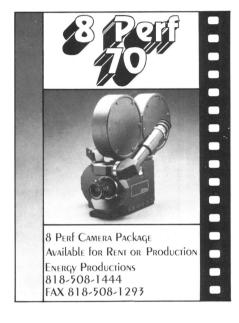




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From the Clubhouse

Respected cinematographer Marvin Rush was approved for active membership in the ASC and longtime lab technician Joe Violante was voted in as an associate member at the November meeting of the Board of Governors.

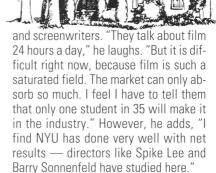
Marvin Rush is currently in his second season as director of photography on the Paramount weekly television show Deep Space Nine. Prior to that Rush served three seasons as director of photography on Deep Space Nine's mother series. Star Trek: The Next Generation. While shooting the two sciencefiction shows, Rush became acquainted with the director of photography of the original Star Trek series, Gerald Finnerman, ASC, whom he considers both an influence and an inspiration. Rush started out as a camera operator on Newhart and Foley Square before gaining experience as a director of photography on such television shows as *Easy* Street, The Tracey Ullman Show, Frank's Place and Dear John.

Joe Violante has spent 26 years in the motion picture industry as a trusted Technicolor lab technician, working with many top cinematographers. Violante got his start as a can carrier for Mecca Film Lab before moving to Technicolor in New York, where he has worked for the last 23 years. His duties there have included serving as a lab finisher, negative cutter, printer and developer before earning his current status as a vice president in charge of production, in which he views motion picture dailies as a representative of Technicolor.



Sol Negrin, ASC, is currently in his second year as a teacher of advanced cinematography for third-year graduate students at the NYU Tisch School for the Arts. In between his classroom duties, Negrin is shooting a half-hour syndicated cable television program, *Space Station*, in Saratoga, New York.

Negrin said he enjoys the "enthusiasm and exuberance" of his students. He estimates that 70 percent are aspiring directors, while the rest are seeking to become cinematographers



Although he continues to shoot whenever the celluloid urge strikes, Negrin has no immediate plans to leave the classroom. "I really enjoy teaching," he says. "I've gotten a lot out of the film industry, and this is a good way to put something back in."



Jean Galerne, 65, who brought HMI light sources into television and motion pictures in the late '60s, died of cancer at his home in France last September. As managing director of LTM for 25 years, Galerne was responsible for many innovations, including the design of the popular single-ended PARs. He is survived by his wife Micheline and two sons, Gilles and Marc, who remain active in K 5600, Inc., the Hollywood lighting company Galerne created in 1992.



ASC president Victor Kemper, Adam Holender, ASC, and associate ASC member Roman Hart attended the first edition of the Camerlmage '93 International Film Festival from November 22-28 in Torun, Poland. European cinematographers in attendance included Sven Nykvist, ASC, Vittorio Storaro, ASC, AIC, and Ryszard Horowitz (who served as members of the jury), in addition to representatives of the European Federation of Cinematographers such as Josef Hanus (CSC—The Czech Republic), Pierre Lhomme (AFC-France), Harvey Harrison (BSC—Great Britain), Wolfgang Treu (BVK—Germany) and Tote Trenas (AEC—Spain). Films scheduled to be screened at the festival included The Age of Innocence, The Piano, Sacrifice, Malcolm X, Stalingrad, The Cement Garden and Visions of Light. - CP

95

In Memoriam

Harry Wolf, ASC, four-time ASC president and a veteran of 50 years in motion pictures, died November 10 at Cedars Sinai Hospice. Wolf became an ASC member in 1963 and had served on the board of directors since 1966. He was vice president and treasurer prior to his final illness and was active on many committees, including the annual ASC Awards programs. ASC President

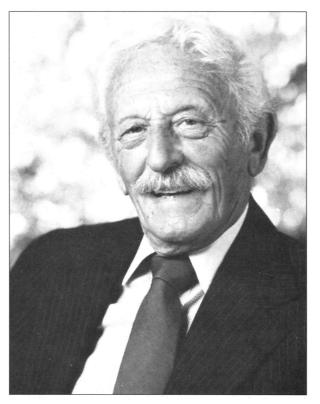
Victor J. Kemper called Wolf "loyal, dedicated and caring...[his passing is] a great loss to the ASC."

Born in San Francisco, Wolf came to Los Angeles in 1934, having left college to become an assistant cameraman at Monogram Pictures. Two years later he moved from Poverty Row to the heady atmosphere of Selznick International Pictures at the RKO Pathé "Forty Acres" lot in Culver City. He worked there as an assistant and operator on many outstanding pic-

tures, including *Prisoner of Zenda, The Young in Heart, Gone with the Wind* (he was the last surviving member of the *GWTW* camera crew), *Intermezzo, Rebecca, Made for Each Other* and *Duel in the Sun.* He also worked for 2 1/2 years in the Selznick special photographic effects department with Jack Cosgrove, ASC and Clarence Slifer, ASC.

As a free-lancer Wolf worked at all the major studios on more theatrical features than he could name. These included South of Pago Pago, For Whom the Bell Tolls, National Velvet, Ten Gentlemen from West Point, The Broken Arrow, Anchors Aweigh, Salome, Bathing Beauty, Captain from Castile and The

Yearling. Wolf's long familiarity with the cumbersome three-strip Technicolor equipment led to a contract with Technicolor under which he was assigned to work at various studios, usually without screen credit, as co-cinematographer on many films made with the difficult process. His contributions to Yolanda and the Thief, Destination Moon and other landmark color films is evident.



Universal, impressed in particular by his work in Val Lewton's last production, *Apache Drums*, made a deal with Technicolor to keep Wolf at Universal City full-time as their color advisor. *Bend of the River, Thunder Bay, Cochise, Tap Roots* and *The Glenn Miller Story* were among his notable features at Universal.

Wolf later became a director of photography in television and photographed more than 500 productions. His TV series credits included *Henessy* with Jackie Cooper for three 26-episode seasons, *The Beverly Hillbillies* for eight years, and *Baretta* with Robert Blake for three years. Other shows were *Don't Call Me Charlie*, *Petticoat Junction* with

Eddie Albert and Eva Gabor, Tenafly, Barnaby Jones with Buddy Ebsen, The Snoop Sisters with Helen Hayes, Sunshine, Father Murphy, The George Burns Show, The Bob Cummings Show, Little House on the Prairie with Michael Landon, Columbo with Peter Falk, Remington Steele with Stephanie Zimbalist and Pierce Brosnan, and Jack Webb's last series, Project UFO. He received four Emmy nominations and won the award twice for episodes of Columbo and Baretta.

Among his many Movie of the Week features were the four-hour special of Aldous Huxley's Brave New World, for which he received an Emmy nomination, and Hound of the Baskervilles, with Stewart Granger as Sherlock Holmes. Others included A Little Game, Two On a Beach, What's a Nice Girl Like You, Little "Mo," Loose Change, Never Kiss a Stranger, Cry in the Wilderness, The Devil and Miss Sarah and Vanities. Between assignments he photographed innumerable commercials.

Personable and colorful, Harry Wolf was a highly respected member of the film community. He was a member of the board of governors of the Academy of Television Arts and Sciences, which honored him with a Lifetime Achievement . Award in 1993. He was well known as an educator, having conducted classes and seminars at the American Film Institute. and was active on various committees of the Academy of Motion Picture Arts and Sciences. He was formerly a local manager for the Society of Motion Picture and Television Engineers. Wolf was elected an Honorary Member of the Chinese Society of Cinematographers, which he helped organize with his friends in Taiwan along the guidelines of the ASC, and of the Society of Operative Cameramen. Recently he was honored at the La Jolla Film Festival.

He is survived by his wife, Rae; a daughter, Jacqueline Drosch; and two granddaughters. The family requests that donations be made to the Motion Picture and TV Fund, 23300 Ventura Blvd., Woodland Hills, California 91364, or to the Norris Cancer Center, 1420 San Pablo St., Los Angeles 90033. — G.T.

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port. The bottom

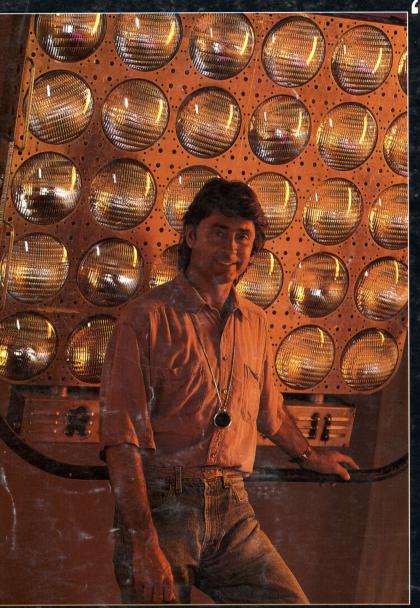
film. Of course, I don't shoot it just for laughs.

there's nothing funny about a flat sitcom.



Wayne Kennan

Director of Photography, SEINFELD.



REINHART PESCHKE, ready to shoot with his Raybeam and Gold GamCloth.

"My favorite GamColors are 320 Peach and 375 Flame."

"I use these colors together to simulate firelight. The Flame colors my direct light, controlled by an SPE-5 Flicker Master. The Peach is for bounce light, reflecting off Gold GamCloth. I can manipulate the GamCloth to vary the mix and create a realistic depth for the effect. The 375 Flame really looks like fire!"

REINHART PESCHKE
Gaffer

REINHART PESCHKE

'Gaffer' is an understated title for Peschke. He has over 20 years of experience as gaffer, lighting director and technical director, dividing his time between feature films, commercials and videos. Because they give him the opportunity to experiment with new ideas and technology, he finds that commercials and videos are vital to his professional growth.

Grass never grows under Peschke's feet! His resume includes over 100 films, over 3000 commercials and over 400 music videos. Highlights of his film career include: NATURAL BORN KILLERS (Oliver Stone, for release in 1994), JFK, BORN ON THE 4th OF JULY, TEEN-AGE MUTANT NINJA TURTLES III, TALK RADIO, EIGHT MEN OUT, CABARET, LESS THAN ZERO, and ROLLERBALL.

He designed the versatile RAYBEAM fixture pictured here and rents it through his Rayteam Productions, Inc.

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